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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using sw model
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1: /SIDS2/gcgdata/g
2: /SIDS2/gcgdata/g
3: /SIDS2/gcgdata/g
4: /SIDS2/gcgdata/g
4: /SIDS2/gcgdata/g
6: /SIDS2/gcgdata/g
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7: /SIDS2/gcgdata/g
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length: 2000000000
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Match
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1277
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    Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                        /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA198.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA199.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
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/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2002.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
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    112
112
116
118
119
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23
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                      AAR13063
AAR11474
AAR13858
AAR77419
AAR66688
AAW26237
AAW48886
AAY07303
AAB66929
                                                                                                                                                                                                                                                                                                        SUMMARIES
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                                                                                                                                                                                                                                   Description
                                         Human
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                                                                                                          Human
                                                                  Human
                                                                                                                                                 Human nerve
                                                                                                                                                                                           Human NGF SmaI-Apa
                                     n nerve growth
n nerve growth
n preproNGF.
n prepro-nerve
n nerve growth
                   NGF.
                                                                                                                                                                          nerve
  beta
                                                                                                                                                                                                                                                                                                                                                                 printed,
Homo
                                                                                                                                               growth
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Sequence encoded b	AAP40040	տ	119	50.3	642	5
Human nerve growth	AAP91034	10	118	50.3	642	4
Pantropic neurotro	AAR90531	17	120	50.4	643	ū
Human beta-nerve g	AAP61033	7	262	50.7	647	2
Human nerve growth	AAP91299	10	261	50.7	647	Ξ
acid se	AAG67679	22	167	50.7	647.5	ö
wth fac	AAM50301	23	166	50.7	647.5	39
	AAU85725	23	157	50.7	648	8
Amino acid sequenc	AAG67677	22	157	50.7	648	37
growth	AAB01596	21	157	50.7	648	8
e growth	AAM50303	23	156	50.7	648	5
=	AAB35944	22	120	51.0	651	4
Nerve growth facto	AAG64994	22	120	51.0	651	ü
minal of	AAB29141	21	120	۲.	651	ະ
Nerve growth facto	AAW81117	20	120	51.0	651	3
Human growth hormo	AAR22751	13	154	۲.	657.5	ö
Chimeric neurotrop	AAR21851	13	124	۲.	661	9
Recombinant mini-f	AAW24145	18	129	Ψ	682	8
4	AAR37539	14	129	53.4	682	27
NGF2/NT-3 in pTB13	AAR26273	13	240	77.6	991	6
≥	AAR56451	15	240	8	996	5
řor	AAR43937	14	240	8	996	24
mouse pre	AAR45240	14	307	ŗ	1093	3
Sequence encoded b	AAP40039	υ	307	85.8	1096	ະ
Sequence encoded b	AAP40036	տ	307	5	1096	2
nerve q	AAM50845	23	240	5	1096	õ
an proNGF	AAW90884	21	222	۲.	1175	9
-	AAR13886	12	241	ω	1188.5	8
growth fact	AAR43910	14	239	٥.	1238	7
beta-nerve	AAW69725	19	307	9.	1264	6
NGF.	AAR37799	14	307	9	1266	5
-	AAB67865	22	241	9.	1266	4
н	AAR45241	14	307	9	1267	ū
ce encoded b	AAP40038	σ	245	99.5	1270	2
Human beta nerve q	ABB04994	23	241	9	1270	Ξ

## ALIGNMENTS

RESULT 1

AAR13063 standard; Protein; 241 AA

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Expression vector; human nerve growth factor; yeast; senile dementia.
        Disclosure; Fig 1(1-2); 14pp; Japanese
                                                WPI; 1991-218449/30.
N-PSDB; AAQ12638.
                                                                                                                                          JP03139285-A
                                                                                                                                                                                                Human NGF SmaI-ApaI fragment prod
                                                                                                                                                                                                                   30-SEP-1991
                                                                                                                                                                                                                                  AAR13063;
                        New yeast expression vector - factor from corresp. yeast.
                                                                        (TAKE ) TAKEDA CHEMICAL IND KK
                                                                                          27-JUL-1989;
                                                                                                        20-DEC-1989;
                                                                                                                         13-JUN-1991
                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                 (first entry)
                                                                                          89JP-0192581.
                                                                                                         89JP-0328199.
                               used in prodn. of human nerve growth
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RESULT 2
AAR11474
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Best Loc
Matches
                                                                                                                             Disulfide-bond
Disulfide-bond
Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human NGF is useful as a reagent for study of the nervous system, for treatment of senile dementia. The DNA encoding this fragment derived from the human gene or is synthesised chemically.
                                            21-AUG-1989;
20-DEC-1989;
13-APR-1990;
07-JUN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                               Human
                                                                                                                                                                                                                                                                                            AAR11474 standard;
                             (TAKE
                                                                                  17-AUG-1990;
                                                                                                                EP414151-A.
                                                                                                                                                            Protein
                                                                                                                                                                           Protein
                                                                                                                                                                                                  Key
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              Kakinuma A,
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                                                                                                                                                                                          Peptide
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1991-059398/09
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                                                                                                                                                                                                                                dementia
                                                                                                                                                                                                                                                             (first entry)
               Nakahama
                                           89JP-0212980.
89JP-0328198.
90JP-0096252.
90JP-0147392.
                              CHEMICALS IND
                                                                                  90EP-0115815
                                                                                                                                            /label=
135..202
                                                                                                                                                            /label= signal sequence
19.241
/label= pro-NGF
122.241
                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                             Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.5%; Score 1270; DB 12; 100.0%; Pred. No. 1.3e-134;
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               Yoshimura
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RESULT 3
AAR13858
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Matches 241
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                               30-SEP-1989;
15-DEC-1988;
12-DEC-1989;
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                                                                             12-DEC-1989;
                                                                                                  31-JUL-1991
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ilarity 100.0%;
Conservative
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                               89JP-0253796.
88JP-0314860.
89JP-0320483.
                                                                              89JP-0320483
                                                                                                                                                                                                                                                             Protein;
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Pred. No. 1.3e-134;
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                                                                                                                             Key
                                                                                                                                                        werve growth protein refol
                                                                                                                                                                                                                                                                                                                                                                                                                                                           The amino acid sequence is encoded that of human nerve growth (NGF). It may be expressed in Schizosaccharomyces pombe using glyceraldehyde-3-phosphate dehydrogenase (GLD) gene promoter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Secretory prepn. of animal Schizosaccharomyces pombe v promoter region.
Bonam
                             27-JUN-1994;
09-MAY-1994;
                                                   02-MAY-1995;
                                                                                                      Region
                                                                                                                                           Homo sapiens
                                                                                                                                                                                Human nerve
                                                                                                                                                                                               10-FEB-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 3; 12pp;
                                                                   16-NOV-1995
                                                                                 WO9530686-A1
                                                                                                                     Protein
              (SYNT ) SYNTEX-SYNERGEN NEUROSCIENCE JOINT VENTU.
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DB; AAQ13397.
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                                                                                                                                                                                                                                                                                             DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
                                                                                                                                                                                                                                                                                                     DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
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                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                         refolding;
Kohno
                                                                                                                                                                                                                                                                                                                                                                                                                                               241 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                               growth factor
                                                                                                                                                                factor;
                                                                                                                                                                                               (first entry)
                             94US-0266080
94US-0240122
                                                   95WO-US05423
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                                                                                                             /note-
                                                                                                                     Location/Qualifiers
                                                                                                                                                         r; neurotrophic NGF.
Lile J,
                                                                                                                                                                                                                                                                                                                                                                                                                        99.5%;
                                                                                                             "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               which reta:
                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1270; DB 12;
Pred. No. 1.3e-134;
Rosendahl MS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ein - by
retains
                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              culturing
DNA at 3'-terminal
                                                                                                                                                                therapeutic;
                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                             Length
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RESULT 5
AAR66688
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Best Local S
Matches 241
Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1995-404080/51.
N-PSDB; AAT05437.
              Misc-difference
                                                                                                                                   Human nerve
                                                                                                                                                 23-AUG-1995
                                                                                                                                                                               AAR66688 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 33-34; 57pp; English.
                            Misc-difference
                                                                                              Homo sapiens
                                                                                                                     Human nerve
                                                                                                                                                                AAR66688;
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                           Misc-difference
                                                          Peptide
                                                                        Peptide
                                                                                                             immunogen; enzyme
                                                                                                                                                                                                                                  242
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                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.
es 241; Conservative
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                                                                                                                                                                                                                                   A 242
                                                                                                                                                                                                                                                                                                                                                                                                  241 AA;
                                                                                                                                  growth
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              /note-
173
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19..121
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                                                  /label=
                                                                                                             immunoassay.
                                                                                                                                   factor
                                                                                                                                                                              Protein;
                                                                                                                                                 entry)
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The nerve growth factor (NGF) gene is expressed in Escherichia coli cells. The recombinant protein is solubilized and sulfonylated and allowed to refold in the presence of PEG and urea. Biologically active NGF, used for promoting the survival of and maintaining the phenotypic differentiation of nerve and gilal cells, is isolated and purified. This method breaks incorrectly formed disulphide bonds and allows refolding of the factor into the correct tertiary structure required for maximum yield of full active protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Process for bacterial expression of recombinant neurotrophic factor - useful for promoting the survival and maintaining phenotypic differentiation of nerve and glial cells.
                                                                                                                                    Score 1270; DB 16;
Pred. No. 1.3e-134;
0; Mismatches 0;
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                                                                                                                                                                                                      Length
                                                                                                                                        0
                                                                                                                                        Gaps
                                                                  61
60
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DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
                 DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
                                                                                                    RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                                                                                                                                                                        ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK
                                                                                 RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                                                                                                                                                  ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK
                                                                                                                                                                                                       121
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growth factor; hNGF; polyclonal antibody;
                                                                                                      Location/Qualifiers
"corresponding
                    "corresponding
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                                                                                   sig_peptide
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RESULT 6
AAW26237
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                  AAQ79871 encodes AAR66688 human nerve growth factor (hNGF), protein was used as an immunogen to generate a polyclonal antibody against hNGF. The polyclonal antibody can be used to detect and determine hNGF pref. by enzyme immunoassay.
                                                              Fusion protein; hydrophilic spacer; carboxypeptidase; preproNGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disulfide-bond Disulfide-bond
31-JAN-1997;
               07-AUG-1997
                                                                                       Human preproNGF
                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Pages 31-33; 35pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polyclonal antibody against human nerve growth factor useful to detect human NGF, for diagnosis of disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1995-033116/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-FEB-1991;
                                               Homo sapiens
                                                                                                         16-MAR-1998
                                                                                                                                        AAW26237 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TAKE ) TAKEDA CHEM IND LTD
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                                                                                                                                                                                                                  RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                                                                                                                                                                                                                                                                                                            MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61
                                                                                                                                                                                                                                                                                                                     MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
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                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                     241 AA;
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                                                                                                        (first
97WO-US01470
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179..
189..
                                                                                                                                         Protein;
                                                                                                       entry)
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                                                                                                                                                                                                                                                                                                                                                            Score 1270; DB 16;
Pred. No. 1.3e-134;
                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                        recombinant;
                                                                                                                                                                                                                                                                                                                                                     0;
                                                                        expression system;
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                                                                                                                                                                                                                                                                                                                                                                     Length 241;
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RESULT 7
AAW48886
IID AAW4
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AC AAW4
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DT 12-0
XX
DE Huma
XX
KW Neur
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OS Homo
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Best Local S
Matches 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A novel recombinant vector has been developed which comprises a nucleotide sequence encoding a fusion protein. The fusion protein comprises three domains joined together in order, from N-terminus to C-terminus, of a first domain comprising a protein of interest, a secon domain comprising a hydrophilic spacer and an affinity domain, each domain comprising amino acid residues. The present sequence represents human preproNGF, used in example 6 of the present invention. The recombinant vector is used for the production of authentic recombinant proteins of interest. The method of the invention is useful for the expression of fusion proteins capable of isolation by affinity chromatography in pro- or eukaryotic cells. This method allows for the efficient cleavage and generation of authentic proteins of interest that do not contain extraneous (i.e. non-naturally occurring)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1997-402624/37.
N-PSDB; AAT80162.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-JAN-1996;

    Recombinant protein expression system for fusion protein production
    useful for high quantity production of authentic recombinant

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TECH-) TECHNOLOGENE INC
                                                       Neurotrophin;
                                                                                  Human
                                                                                                              12-OCT-1998
                                                                                                                                                                    AAW48886 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 6; Page 140-141; 194pp; English
                                       hydrophobic
                                                                                                                                          AAW48886
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                                                                                                                                                                                                                                                                     A 242
                                                                                                                                                                                                                                                                                                                                                         RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                                                                                                                                                                                                                                                                                                                                                      RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR 181
                                                                                                                                                                                                                                                                                                                                                                                                                            ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
                                                                                                                                                                                                                                                                                                                                                                                                             ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 120
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                                                                                prepro-nerve growth factor beta chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 AA;
                                         interaction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                              (first
                                                       nerve growth factor; NGF; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-0595043
                                                                                                                                                                     Protein;
                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.5%;
                                          chromatography.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1270;
Pred. No. 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 18;
.3e-134;
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                                                       purification;
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Homo sapiens

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This polypeptide comprises the human nerve growth factor (NGF)
CC beta chain precursor. Methods are provided for large-scale
purification of neurotrophins, including mature NGF, suitable for
CC clinical use. A claimed method comprises: (1) separating the
CC neurotrophin from the other proteins using a hydrophobic
CC interaction chromatography resin (HICR); and optionally (2)
CC separating the neurotrophin from a chemical variant by high
CC performance cation exchange chromatography (HPCEC). The processes
CC can also be used for purification of e.g. mouse NGF (see AAW4887),
CC brain-derived neurotrophic factor (see AAW4888), neurotrophin-4/5
CC (see AAW4889)) and neurotrophin-3 (see AAW4888). The processes allow
CC separation of neurotrophins from various undesirable misprocessed,
CC misfolded, size, glycosylated or charge forms. They allow selective
CC separation from their variants and other molecules, and from other
CC separation swith high pI. The processes are applicable to
CC starting materials from various sources, including fermentation
CC broths or lysed bacterial or mammalian cells.
                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isolation of neurotrophin(s) from, e.g. mis-folded or glycosylated variant(s) - using hydrophobic interaction chromatography, optionally in combination with high performance cation exchange
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 4; 59pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-322333/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Beck
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15-NOV-1996;
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                                                                                                                                                                                                                                                                                                                                                                             Sequence
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                                                            RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                         {\tt RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR}
                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                             Conservative
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96US-0030838
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167
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                                                                                                                                                                                                                                                                                                            99.5%;
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Cys knot motif"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "conserved Cys-containing
Cys knot motif"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mat_protein
                                                                                                                                                                                                                                                                                       Score 1270; DB 19;
Pred. No. 1.3e-134;
0; Mismatches 0;
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Best Local
                                                                                                                                                                                                                              (CST) axon growth in a mammal with a spinal cord injury that involves a CST lesion by delivering a recombinant expression vector for CST neurotrophin, such as this sequence - nerve growth factor beta. The method is used to induce partial recovery of voluntary motor function in a mammal after disruption of corticospinal projections in the spinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cerebrospinal; axon; growth; mammal; spinal expression vector; neurotrophin; nerve growt NT3; voluntary motor function.
                                                                                                                                                                                                                                                                                                                      cerebrospinal projection axons using a recombinant vector for expressing CST neurotrophin
                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-095478/08.
N-PSDB; AAX34366.
                                                                                                                                                                                                                                                                                                                                                                                                     Gage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human nerve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY07303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY07303 standard; Protein;
                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                         Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                              30-JUN-1997;
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                                                                                                                                                                                                                                                                                    The invention relates to a method of inducing cerebrospinal projection
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                                                                         61
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                                                                                                                                                        Local Sines 241;
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                                                                                 ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
                                                                                                               FΗ,
          DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
                                        RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                                                        ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK
242
                                                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                         Fig 6;
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                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                         49pp; English.
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                                                                                                                                                                  99.5%;
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                                                                                                                                                                 Score 1270; DB 20;
Pred. No. 1.3e-134;
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growth factor 2; n
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Matches 241; Conser
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31-JAN-1995;
12-DEC-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to neuronal factor (NF; also known as neuronotrophin-J/NT-3; see AAF55803-AAF55803 and AAB66927-AAB66928). NF is useful in treating neurodegenerative diseases, e.g. Alzheimer's disease, parkinson's disease, Huntington's chorea and other conditions characterised by necrosis or loss of neurons. NF is also useful for treating damaged nerves, e.g. nerves damaged by traumatic conditions such as burns or wounds. The present sequence is human nerve growth factor (NGF), which was used in a sequence homology alignment with human NF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; neuroprotective; neurodegenerative disease; Huntington's chorea; nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New nucleic acid encoding a neuronal factor (rat precursor neuronotrophin-3, NT-3), useful in the recombinant preparation of NT-3, which is useful for enhancing the survival of nerve cells and treating neurodegenerative diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Huntington's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rosenthal A,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-маү-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
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                                                                                                                                                                                                                                                 MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61
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                         RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR 181
                                                                                                          ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK
                                                                                                                                      ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
                                                                                                                                                                                                                     MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
  RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
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                                                                                                                                                                                                                                                                                                                                                                                                                                       241 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fig 3; 18pp; English.
                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Winslow
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95US-0381030.
89US-0449811.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neuronal factor; NF; neuronotrophin-3; NT-3; se; Alzheimer's disease; Parkinson's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alzheimer's disease; Parkinso damage; nerve growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
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                                                                                                                                                                                                                                                                                                                                  Score 1270; DB 22;
pred. No. 1.3e-134;
0; Mismatches 0;
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ARVAGOTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121

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                                                                                                                                                        The invention relates to a method for delivering therapeutic neurotrophin to targetted defective, diseased or damaged cholinergic neurons in the mammalian brain. The method comprises delivering a neurotrophic composition comprising a neurotrophin encoding transgene into one or more delivery sites within a region of the brain containing targetted neurons. The method is useful for treating neurodegenerative conditions such as Alzheimer's disease, parkinson's disease, amyotrophic lateral sclerosis (ALS) in primates by stimulating the growth of neurons thus recovering neurological function. The present sequence is human nerve growth factor (NGF-2) protein which is a neurotrophin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human beta nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE18904 standard; Protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Delivering therapeutic neurotrophin to targeted defective, diseased damaged cholinergic neurons, useful for treating neurodegenerative disease, comprises administering a neurotrophin encoding transgene is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tuszynski
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (REGC ) UNIV CALIFORNIA.
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                                                                                                          Sequence
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therapy; neuroprotectiv
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                            Similarity
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99.5%;
(larity 100.0%;
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NGF;
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  Score 1270; DB 23;
Pred. No. 1.3e-134;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F; neurotrophin;
Alzheimer's dise
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disease; Parkinson's di
                                                            Length
                                                                  241;
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RESULT 11
ABB04994
AC ABB04
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XX 19-MA
XX 19-MA
XX Human
XX Human
KW neuro
KW aging
XX 19-MA
XX 22-NC
XX 22-NC
XX 22-NC
XX 15-AF
XX WPI;
DR WPI;
CC The F
CC The F
CC GF-Te G
CC G
C-Te G
CC G
C-Te G
C-TE
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                                                                                                                Query Match
Best Local Similarity
Matches 241; Conserv
                                                                                                                                                                                                                                                                       atrophy and loss of accompanying normal aging in the mammalian brain. The method comprises delivering a growth factor (GF)-encoding transgene to preselected delivery sites in the brain, so that the encoded GF is expressed in the brain and stimulates axonal growth in targeted GF-receptive neurons. The growth factor has nootropic, neuroprotective and anti-aging activities, and can be used as a cholinergic neuron growth stimulator and in gene therapy. The method is used to ameliorating neuronal atrophy and loss of accompanying normal aging, in the human brain. The present sequence represents human beta nerve growth factor, which is given in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ameliorating neuronal atrophy and loss of accompanying normal aging comprises delivering a transgene encoding a growth factor to a mammalian brain to stimulate axon growth in cholinergic neurons -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; nerve growth factor 2; beta nerve growth factor; NGF-2; N
neurotrophin-3; nervous system growth factor; neuronal atrophy;
aging; brain; axonal growth; neuron; nootropic; neuroprotective;
anti-aging; cholinergic neuron growth stimulator; gene therapy.
                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 6 1-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tuszynski MH, Blesch
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                          MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
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MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
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BLESCH A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention describes a method for ameliorating neuronal
                                                                                                                Conservative
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                                                                                                                                        99.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18pp; English.
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                                                                                                          Score 1270; DB 23;
Pred. No. 1.3e-134;
0; Mismatches 0;
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RESULT 12
AAP40038
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                                                 Query Match
Best Local S
Matches 241
                                                                                                                                                                       The inventors claim human beta-nerve growth factor (NGF) free from other proteins of human origin. Also claimed are the DNA sequence encoding human beta-NGF operably linked with a DNA sequence capable of effecting its expression in a recombinant host cell; a replicable
                                                                                                                       expression vector contg. the DNA; and host cells transformed with the vector. The plasmid claimed is plasmid ph beta-NGF trp 1. Us. the plasmid, larger amounts of pure beta-NGF are obtainable than extn. of natural materials, see e.g. EP--2139.
                                                                                                                                                                                                                                                           Human beta-nerve growth factor free from other proteins by recombinant DNA techniques for treating nerve damage
                                                                                                                                                                                                                                                                                                                                     Gray AM,
                                                                                                                                                                                                                                                                                                                                                                                                               02-MAR-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                        10-OCT-1984.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAP40038 standard;
                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                              WPI; 1984-251909/41.
                                                                                                                                                                                                                                                                                                                                                                                      03-MAR-1983;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (NGF) chromosomal
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                                                                                                                                                                                                                                  Example; Fig 5; 42pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nerve damage;
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                        MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
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MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
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                                                            Similarity
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                                                                                                                                                                                                                                                                                                                                     Ullrich A;
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                                                  Conservative
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                                                            99.5%;
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                                                            Score 1270; DB 5;
Pred. No. 1.4e-134;
                                                  Mismatches
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62 ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121

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                                  Query Match
Best Local Similarity
Matches 240; Conserv
                                                                                                                                                                                                                    Baecker
Ward C;
                                                                                         The sequence is that of human pre-pro nerve growth factor which was used in a method of producing biologically active mature human beta-nerve growth factor in insect cells.
                                                                                                                                                  Prodn. of active mature human beta-nerve growth factor in insect
cells - using baculovirus expression system, and potential use of
recombinant hNGF in treatment of Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                           Key
                                                                                                                                                                                                                                                                                                                                                                                                                              expression;
                                                                                                                                                                                                                                                                                                                                                                                                                               Mature; beta-nerve growth factor;
expression; NGF; hNGF; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR45241;
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20-JUL-1989;
                                                                                                                                                                                                                                                                                                                 21-DEC-1993
                                                                                                                                                                                                                                                                                                                                   US5272063-A
                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR45241 standard; Protein;
                                                                         Sequence
                                                                                                                                 Disclosure; Fig 1; 23pp; English
                                                                                                                                                                                                                                               (SYNT ) SYNTEX USA INC
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                                                                                                                                                                                                                                                                                                                                                                                Peptide
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         MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61
                                                                                                                                                                                        1993-413401/51.
DB; AAQ54283.
MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                           pre-pro
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                                     Conservative
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89US-0383118
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188..307
/note= "mature pentide"
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                                                                                                                                                                                                                              Bursztyn-Pettegrew
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                                  Score 1267; DI
Pred. No. 4.2e
1; Mismatches
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Alzheimer's Disease
                                   DB 14;
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RESULT 14
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06-OCT-1999;
13-OCT-1999;
06-DEC-1999;
29-JUN-2000;
                                                                                                                                                                                                                                                                                                                               PTMA; immune deficiency; infection; autoimmune disorder; wound closure; connective tissue disease; multiple sclerosis; rhemmatoid arthritis; systemic lupus erythematosus; autoimmune pulmonary inflammation; ulcer; Guillian-Barre syndrome; autoimmune thyroiditis; myasthenia gravis; insulin dependent diabetes mellitus; graft-versus-host disease; autoimmune inflammatory eye disease; gut protection; gut regeneration; fibrosis; reperfusion injury; systemic cytokine damage.
                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB67865;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB67865 standard; Protein;
                                                                                                                                                                                                                                                                              05-APR-2001.
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DB; AAF80462.
                                                                                                                                                                                                                                                                                                                sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                   sequence of a human polypeptide designated PTMA-8.
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99US-0169344.
2000US-0215048.
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99US-0158942.
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The present sequence represents a PTMA-8 (not defined) polypeptide. The sequence is derived from clone A1049825. The polypeptide is 26958.5 daltons. PTMA polynucleotides and polypeptides are used in the manufacture of a medicament for treating a syndrome associated with a human disease, the disease selected from a pathology associated with PTMA. They may be useful in the treatment of various immune deficiencies and disorders. These immune deficiencies may be genetic or caused by viral as well as bacterial or fungal infections or may result from autoimmune disorders. Autoimmune disorders which may be treated using autoimmune deforces, connective tissue disease, multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary

Novel

polypeptides termed PTMAX, for detecting and treating

treating English.

and

and nucleic acids diseases caused i

mmune deficiencies

Claim 1; Page 20-22; 128pp;

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ID AAR37799
AC AAR37
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KW Chime
KW BDNF;
KW Centr
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BDNF; chimera; fo
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                                                                                                                                                                                                                   13-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                                   Protein
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                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents human nerve growth factor (NGF). The protein cencoded by this sequence promotes the development of the peripheral nervous system and also influences the development and maintenance of specific populations of neurons in the central nervous system. Two major transcripts from the NGF gene result in a "long" and "short" NGF prepropeptide. The "short" precursor contains a conventional signal sequence at the N-terminus which flanks the pro-region. The "long" precursor contains an additional "pro-region" at its N-terminal. No functional distinction has been elucidated between the "long" and "short" forms. Characteristics of NGF, such as isoelectric point and primary structure, are very similar to barin derived neurotrophic construction of a chimeric nucleic acid molecule to encode a prepro-
                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 240
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                                                                                                                                                                                                                                                                                                                                                            Sequence
 307
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                                                                                                                                                                                             ARVAGQTRNITYDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPENRTHRSK 121
                                                                                                                                                                                                                                                        MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
                                                         DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
                                                                                                                                                                                                                                       MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 126
                                                                                                                                                                               ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK
                                                                                                                                                                                                                                                                                                                                                              307 AA;
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     Pred. No. 1s the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  11124
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1: pir1:*
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                    nerve growth facto nerve growth facto beta-nerve growth facto nerve growth facto neurotrophin-3 pre neurotrophin-3 pre hippocampus-derived nerve growth facto nerve growth facto nerve growth facto neurotrophin-6 - s brain-derived neurotrophin-1 pre in-derived neurotrophin-4 pre pre neurotrophin-4 p
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
78	78.5	78.5	78.5	78.5	78.5	78.5	79	79	79.5	80	83	84.5	307.5	316.5	323.5
6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.2	6.2	6.2	6.3	6.5	6.6	24.1	24.8	25.3
323	1609	1084	1076	742	701	513	1095	807	749	835	397	5126	114	114	114
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S69647	E87243	B64088	D82083	T43520	T52384	AI2555	T24061	A53225	E86774	C97322	S52783	S40450	I51599	I50606	I84765
hypothetical prote	probable cation tr	hemoglobin-binding	carbamoyl-phosphat	condensin complex		hypothetical prote	hypothetical prote	ecdysone-induced p	hypothetical prote	probable alpha-ara	aspartic proteinas	ryanodine receptor	brain-derived neur	brain-derived neur	brain-derived neur

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Qy 122 RSSSHPIFHRGEFSVCDSVSVWVGDN	Qy 62 ARVAGQTRNITVDPRLFKKRRLRSPF 	Qy 2 MSMLFYTLITAFLIGIQAEPHSESN 	Query Match 99.5%; Sometime 100.0%; For Matches 241; Conservative 0;	c; Reywords: glycoprotein; growth fac C; Keywords: glycoprotein; growth fac F;1-166/Domain: signal sequence and F;167-284/Product: nerve growth fact F;26,114,159,211/Binding site: carbc F;36,114,159,224-274,234-276/Disulfide	A; Cross-reterences: GDB:120233; OMIN A; Map position: 1p13.1-1p13.1 A; Introns: 41/3 C; Complex: nerve growth factor is co		A; Residues: 46-286 <bor> A; Cross-references: EMBL: X52599; NII C; Comment: Nerve growth factor is fo</bor>	A;Accession: S10253 A;Status: translation not shown A;Molecule type: mRNA	A; Title: cDNA sequence of human beta A; Reference number: S10253; MUID:903	A; Residues: 1-286 <ull> R; Borsani, G.; Pizzuti, A.; Rugarli, E.I.; Nucleic Acids Res. 18, 4020, 1990</ull>	A;Title: Human beta-nerve growth fac A;Reference number: A93305; MUID:832 A;Accession: A01399 A:Molecule type: DNA	R;Ullrich, A.; Gray, A.; Berman, C.; Nature 303, 821-825, 1983	C; Accession: A01399; S10253	RESULT 1 NGHUBM OF THE TRANSPORT OF THE		38 79 6.2 1095 2 T23 39 78.5 6.1 513 2 T35 40 78.5 6.1 742 2 T43 41 78.5 6.1 1076 2 D83 42 78.5 6.1 1076 2 D83 44 78.5 6.1 1609 2 E86 45 78 6.1 323 2 S6
RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR 181 	ARVAGQTRNITVDPRLEKKRRLRSPRVLESTQPPREAADTQDLDEEVGGAAPENRTHRSK 121 	MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61 	Score 1270; DB 1; Length 286; Pred. No. 6.2e-112; 0; Mismatches 0; Indels 0; Gaps 0;	C;Reywords: glycoprotein; growth factor; submandibular gland C;Reywords: glycoprotein; growth factor; submandibular gland C;Reywords: glycoprotein; growth factor; submandibular gland F;1-166/Domain: signal sequence and propeptide (fragment) #status predicted <maty #status="" (asn)="" (covalent)="" <maty="" beta="" binding="" bonds:="" carbohydrate="" chain="" disulfide="" f;167-284="" f;181-246,224-274,234-276="" f;26,114,199,211="" factor="" growth="" nerve="" predicted="" predicted<="" product:="" site:="" td=""><td>OMIM:162030  s composed of two alpha chains, two beta chains, and</td><td>TH ATTER AND TO THE THE THE THE THE THE THE THE THE THE</td><td>32.1; PID:g29477 gland in large quantit</td><td></td><td>1-NGF. 326556; PMID:2374737</td><td>, E.I.; Falini, A.; Silani, V.; Sidoli, A.; Scarla</td><td>A;Title: Human beta-nerve growth factor gene sequence highly homologous to that of mo A;Reference number: A93305; MUID:83244969; PMID:8688123 A;Accession: A01399</td><td></td><td>C;Date: 19-Feb-1984 #sequence_revision 19-Feb-1984 #text_change 18-Jun-1999 C;Accession: A01399; S10253</td><td>ırsor - human (fragment)</td><td>ALIGNMENTS</td><td>724061 hypothetical prote A12555 hypothetical prote T52384 hypothetical prote condensin complex carbamoyl-phosphat hemoglobin-binding E87243 probable cation tr S69647 hypothetical prote</td></maty>	OMIM:162030  s composed of two alpha chains, two beta chains, and	TH ATTER AND TO THE	32.1; PID:g29477 gland in large quantit		1-NGF. 326556; PMID:2374737	, E.I.; Falini, A.; Silani, V.; Sidoli, A.; Scarla	A;Title: Human beta-nerve growth factor gene sequence highly homologous to that of mo A;Reference number: A93305; MUID:83244969; PMID:8688123 A;Accession: A01399		C;Date: 19-Feb-1984 #sequence_revision 19-Feb-1984 #text_change 18-Jun-1999 C;Accession: A01399; S10253	ırsor - human (fragment)	ALIGNMENTS	724061 hypothetical prote A12555 hypothetical prote T52384 hypothetical prote condensin complex carbamoyl-phosphat hemoglobin-binding E87243 probable cation tr S69647 hypothetical prote

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R. Whittemore, S.R.; Friedman, P.L.; Larhammar, D.G.; I J. Neurosci. Res. 20, 403-410, 1988
A. Tille: Rat beta-nerve growth factor sequence and si. A; Reference number: I56570; MUID:89037223; PMID:31842: A; Accession: I56570
A; Status: preliminary; translated from GB/EMBL/DDBJ A; Molecule type: DNA A; Residues: 1-245 < RES> A; Cross references: GB:M36589; NID:9205691; PIDN:AAA4 C; Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Species: Sus scrofa domestica (domestic p1g)
C; Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_ch
C; Accession: 146614
R; Lahbib-Mansais, Y.; Mellink, C.; Yerle, M.; Gellin, J.
Cytogenet. Cell Genet. 67, 120-125, 1994
A; Title: A new marker (NGFB) on pig chromosome 4, isolated
A; Reference number: 146614; MUID:94313891; PMID:8039422
A; Accession: 146614
A; Accession: 146614
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C; Date: 26-Jul-1996 #sequence
C; Accession: 156570
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C;Genetics:
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C;Superfamily: nerve
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                                                               Query Match
Best Local
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Pred. No. 2.7e-98;
4; Mismatches 13
                                                 Score 1107; DB 2;
Pred. No. 1.2e-96;
4; Mismatches 20
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R;CIross references: GB:(00836; NID:g53364; PIDN:CAA2422 R;Ullrich, A.; Gray, A.; Berman, C.; Dull, T.J. Nature 303, 821-825, 1983 A;Fitle: Human beta-nerve growth factor gene sequence h. A;Reference number: A93305; MUID:83244969; PMID:6688123 A;Accession: A93305
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                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-307 <-RES>
A; Cross-references: GB:M17298; NID:g193493; PIDN:AAA37687.1;
A; Cross-references: GB:M17298; NID:g193493; PIDN:AAA37687.1;
R; Cllrich, A.; Gray, A.; Berman, C.H.; Coussens, L.; Dull, T.
Cold Spring Harb. Symp. Quant. Biol. 48, 435-442, 198
A; Title: Sequence homology of human and mouse beta-NGF subun1
A; Reference number: I52891; MUID:84206565; PMID:6327169
A; Accession: I52891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Cross-references: GB: K01759; NID:g200051; PIDN:AAA39820.1; PID:g387495
A; Note: these authors believe that Met-67 is probably the amino-terminal R; Angeletti, R.H.; Hermodson, M.A.; Bradshaw, R.A.
Blochemistry 12, 100-115, 1973
A; Title: Amino acid sequences of mouse 2.5s nerve growth factor. II. Isol A; Reference number: A90366; MUID:73075048; PMID:4566923
A; Accession: A90366
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A; Residues: 1-307 <SCO>
A;Introns: 21/2; 62/3
C;Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein; growth factor; homodimer
C;Keywords: glycoprotein; growth factor; homodimer
F;1-187/Domain: signal sequence and propeptide #status predicted
F;188-305/Product: nerve growth factor beta chain #status experin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Title: Mouse nerve growth factor gene: Structure and expression A;Reference number: 149689; MUID:88038855; PMID:3670305 A;Accession: 149689
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A; Residues: 188-216,'N',218-305 <ANG>
A; Residues: 186-216,'N',218-305
R; Selby, M.J.; Edwards, R.; Sharp, F.;
Mol. Cell. Biol. 7, 3057-3064, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-307 <ULL>
                                                                                                                                                                                      A;Cross-references: GB:M14805; NID:g200053; PIDN:AAA39821.1; PID:g200054
C;Comment: The active molecule is a dimer of identical chains associated by noncovale
C;Comment: Nerve growth factor is found in submaxillary gland in large quantities and nic sensory ganglia in vivo and in vitro and to increase cellular neurotubule levels
                                                                                                                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-307 <RE3>
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C:Superfamily: nerve growth factor beta chain C:Keywords: glycoprotein; growth factor; hormone F:1-121/Domain: propeptide #status predicted <PRO> F:122-241/Product: nerve growth factor beta chain #status predicted F:146-154/Region: receptor binding #status predicted F:69,114/Binding site: carbohydrate (Asn) (covalent) #status predicted
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J. Neurochem. 52, 1203-1209, 1989
A;Title: Isolation and sequence of a cDNA clone of beta-nerve
A;Reference number: JL0097; MUID:89177243; PMID:2926397
A;Accession: JL0097.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nerve growth factor beta chain precursor - guinea pig C;Species: Cavia porcellus (guinea pig) C;Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #t C;Accession: JL0097
nerve growth C; Species: Ma
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A; Residues: 1-241 <SCH>
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                                                                                                                   DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALIMDGKQAAWRFIRIDTACVCVLSRKAVRR
                                                                                                                                                                                      RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR 181
                                                                                                                                                                                                                                                                                                       MSMLFYTLITVFLIGIQAEPYSDSNVLSGDTIPQAHWTKLQHSLDTALRRAHSAPAAPIA
                                                                                                                                                                                                                                                                                                                             MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
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                                                                                                                                                                                                                                      ARVAGQTLNITVDPRLFKKRRLHSPRVLFSTQPPPLSTDAQDLDFEVDGAASVNRTHRSK
                                                                                                                                                                                                                                                         ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
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                                                                                                 DPSPVDSGCRGIDSKHWNSYCTTTHTFVKALTTANKQAAWRFIRIDTACVCVLNRKAARR
                                                                                                                                                                    RSSTHPVFHMGEFSVCDSVSVWVADKTTATDIKGKEVTVLAEVNVNNNVFKQYFFETKCR
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Pred. No. 2.9e-95;
10; Mismatches 23;
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Pred. No. 1.7e-95;
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               natalensis)
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nerve growth factor beta chain precursor - chicken (fragment) C;Species: Gallus gallus (chicken) C;Date: 05-Oct-1988 *sequence_revision 05-Oct-1988 *text_change C;Accession: A2631; A24857; S0127; S12532 R;Ebendal, T.; Larhammar, D.; Persson, H. EMBO J. 5, 1483-1487, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:M22748; NID:g202514; PIDN:AAA40599.1; PID:g20A;AOCTOSS-references: GB:M22748; NID:g202514; PIDN:AAA40599.1; PID:g20A;AOCTOSS-references: GB:M22748; NID:g202514; PID:AAA40599.1; PID:g20A;AOCTOSS-references: A;Note in the initiator C;Superfamily: nerve growth factor; homodimer; submaxillary glag;184-901/Product: nerve growth factor beta chain *status predicted F;131.176,289/Binding site: carbohydrate (Asn) (covalent) *status preficted F;198-263,241-291,251-293/Disulfide bonds: *status predicted
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A;Title: Molecular cloning of a cDNA encoding the nerve A;Reference number: JT0343; MUID:89172070; PMID:3234767 A;Accession: JT0343
A;Molecule type: DNA
A;Residues: 121-243 <MEI>
A;Cross-references: GB:M26810; NID:g212446; PIDN:AAA48984.1;
A;Cross-references: GB:M26810; NID:g212446; PIDN:AAA48984.1;
A;Tibanez, C.F.; Hallboeoek, F.; Ebendal, T.; Persson, H.
EMBO J. 9, 1477-1483, 1990
A;Tille: Structure function studies of nerve growth factor:
A;Reference number: S12532; MUID:90228346; PMID:2328722
                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:X04003; NID:g63697; PIDN:CAA27633.1; R;Wion, D.; Perret, C.; Frechin, N.; Keller, A.; Behar, G.; FEBS Lett. 203, 82-86, 1986
A;Title: Molecular cloning of the avian beta-nerve growth fa;Reference number: A24857; MUID:86248129; PMID:3720959
A;Accession: A24857
                                                                                                                                                                                                       A; Title: Molecular cloning of bovine and chick nerve growth A; Reference number: A26312; MUID:86300647; PMID:2427334 A; Accession: S00127
                                                                                                                                                                                                                                                                                  A;Cross-references: GB:D00010;
R;Meier, R.; Becker-Andre, M.;
EMBO J. 5, 1489-1493, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-243 <EBE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Structure and expression of the chicken beta nerve A;Reference number: A26311; MUID:86300646; PMID:3017695 A;Accession: A26311
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A; Residues: 1-303 <FAH>
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C;Accession: JT0343
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A; Residues: 118-243 <WIO>
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                                                                                                                                                                                  A; Status: preliminary; not
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Best Local Similarity
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Goetz, R.;
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Pred. No. 2.4e-93;
.7; Mismatches 23
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                                                                                                                                                                                                                                                                                                               GB:X04067; NID:g222840; PIDN:BAA00008.1; Heumann, R.; Shaw, A.; Thoenen, H.
                                                                               PIDN:AAA48984.1; Persson, H.
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Brachet, P.;
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                                                                                                          PID: 9212447
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C;Superfamily: nerve growth factor beta chain C;Keywords: growth factor F;1-125/Domain: signal sequence #status predicted <SIG>F;126-243/Product: nerve growth factor beta chain #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                             nerve growth factor beta chain precursor - African clawed frog C; Species: Xenopus laevis (African clawed frog) C; Date: 20-Peb-1995 #sequence_revision 20-Feb-1995 #text_change 16-Jul-1999 C; Accession: S14481 R; Carriero, F; Campioni, M.; Cardinali, B.; Pierandrei-Amaldi, P. submitted to the EMBL Data Library, October 1990 A; Description: Structure and expression of the nerve growth gene in Xenopus
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S14481
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A;Status: preliminary
A;Molecule type: DNA
A;Residues: 126-243 <IBA>
                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:X55716; NID:g64914; PIDN:CAA39249.1; PID:g64915 C;Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: S14481
A; Accession: S14481
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A; Residues: 1-235 < CAR>
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Best Local S
Matches 154
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TT-HGRFAMMPDGTEDLNIAMDQNFFKKKRFRSSRVLFSTQPPPVSRKGQSTGF-LSSAV 115
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                                           FETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLS
                                                                                                                                                                                                                                                                MSMLFYTLITAFLIGIQAEPHSESNVPAGHT----IP-QVHWTK-LQHSLDTALRRARSA
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_ 꽃
                                                                                                         KTIRAKR-TVHPVLHKGEYSVCDSVSMWVGEKTKATDIKGKEVTVLGEVNINNSVFKQYF
                                                                                                                      RTHRSKRSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYF 175
                                                                                                                                                                                     MSMLYYTLLIAILISVQAAPKTKDHAPARSSAKSRIPHHTHRTKSLHHS------
                                                                                                                                                                     -HGKLEAKEPSYFRNVTVDPKLFRKRKFRSPRVLFSTQPPPLSEDFQHLEY-LDDEESLN
                                                                                                                                                                                                                                                                                               154;
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              237
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63.6%;
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                                                                                                                                                                                                                                                                                                               Score 773; DB 2; Pred. No. 3.2e-65;
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nerve growth factor precursor - many-banded krait
C:Species: Bungarus multicinctus (many-banded krait)
C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
C:Accession: I51193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Accession: A26312
R;Meler, R.; Becker-Andre, M.; Goetz, R.; Heumann, R.; Shaw, A.;
EMBO J. 5, 1489-1493, 1986
A;Title: Molecular cloning of bovine and chick nerve growth factor
A;Reference number: A26312; MUID:86300647; PMID:2427334
A;Accession: A26312
A;Molecula type: mRNA
A;Residues: 1-125 CMEI>
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A;Residues: 1-243 <DAN>
A;Cross-references: GB:S56212; NID:g266298; PIDN:AAB25729.1; PID:g266299
C;Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                             A;Cross-references: GB:M26809; NID:g163419; PIDN:AAA30666.1; C;Comment: Nerve growth factor stimulates neurite outgrowth f C;Superfamily: nerve growth factor beta chain c;Keywords: growth factor; homodimer; seminal vesicle F;6-125/Product: nerve growth factor #status predicted <MAT>F;20-85,63-113,73-115/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nerve growth factor beta chain precursor - bovine (fragment)
C;Species: Bos primigenius taurus (cattle)
C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999
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A26312
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118 HRSKRSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFE 177
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95.2%;
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; Pred. No. 5.1e
30; Mismatches
                                                                                                                                       Score 658; DB
Pred. No. 9.9e
4; Mismatches
                                                                                                                                          4;
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.9e-55;
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A; Molecule type: protein
A; Residues: 131-246 < INO>
A; Residues: 131-246 venom
A; Experimental source: venom
C; Comment: Nerve growth factor is necessary for the development of embr C; Complex: homodimer
C; Superfamily: nerve growth factor beta chain
C; Keywords: growth factor; homodimer; venom
E; 1-23/Domain: signal sequence #status predicted <SIG>
F; 131-246/Product: nerve growth factor beta chain #status experimental
F; 144-208, 186-236, 196-238/Disulfide bonds: #status predicted
                                                          nerve growth factor beta chain - Russell's viper c;Species: Vipera russelli (Russell's viper) C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 C;Accession: S28161
R;KOyama, J.; Inoue, S.; Ikeda, K.; Hayashi, K.
                                                                                                                                                                 RESULT
S28161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: mRNA
A;Residues: 1-246 <SEL>
R;Inoue, S.; Oda, T.; Koyama, J.; Ikeda, K.; Hayashi, K
R;BS Lett. 279, 38-40, 1991
A;Title: Amino acid sequences of nerve growth factors de
A;Reference number: S13927; MUID:91138755; PMID:1995338
A;Accession: S13965
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C;Species: Naja naja kaouthi
C;Date: 31-Mar-2000 #sequenc
C;Accession: A59218; S13965
R;Selby, M.J.; Edwards, R.H.
      R;KOyama, J.; Inoue, S.; Ikeda, K.; Hayashi, K. Biochim. Biophys. Acta 1160, 287-293. A;Title: Purification and amino-acid sequence o. A;Reference number: S28161; MUID:93120151; PMID
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Species: Naja naja kaouthia, Naja naja siamensis (monoc)
Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_
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Best Local
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      mino-acid sequence of a nerve MUID:93120151; PMID:1477101
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Pred. No. 1
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.6e-53;
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#text_change 31-
                                                                                                  #text_change
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                          venom
                        0
C:Species: Homo sapiens (man)
C:Date: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_che
C:Date: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_che
C:Accession: A36208; JH0141; C40304; S10719; C60536
R:Jones, K.R.; Reichardt, L.F.
Proc. Natl. Acad. Sci. U.S.A. 87, 8060-8064, 1990
A:Title: Molecular cloning of a human gene that is a member
A:Reference number: A36208; MUID:91045937; PMID:2236018
A:Accession: A36208
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                                                                                                                                                         neurotrophin-3 precursor - human N; Alternate names: nerve growth
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A;Gene: NGF
C;Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein; growth factor
C;Keywords: glycoprotein; growth factor
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A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-117 <KOY>
C;Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                 F;1-14/Domain: signal sequence #status predicted <SIG>F;15-79/Domain: propeptide #status predicted <PRO>F;80-194/Product: nerve growth factor beta chain #status predicted F;90-155,133-183,143-185/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Gotz, R.; Raulf, F.; Schartl, M.
J. Neurochem. 59, 432-442, 1992
A;Title: Brain-derived neurophic factor is more high
A;Reference number: 151708; MUID:92333301; PMID:1629719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nerve growth factor beta chain precursor - southern platyfish C; Species: Xiphophorus maculatus (southern platyfish) C; Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_chan
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A; Residues: 1-194 <G
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                                                                                                                                                     40 TVDPKLFNKRRHLSPRVLFSSQPP-----DAEPAGGQGVSRRTRRQPQ-----
                                                                                                                                                                            72 TVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFE-VGGAAPFNRTHRSKRSSSHPIFH 130
                RGIDSKHWNSYCTTTHTEVKALTMDGKQAAWREIRIDTACVCVLSRKA
                                                                       LGIDARHWNSHCTNSHTFVRALTSSENQVAWRLIRINVACVCVLSRKS
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74.18;
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58.9%;
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Pred. No. 7.2e-38;
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Pred. No. 2.2e-38;
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R;Kaisho, Y; Yoshimura, K; Nakahama, K.
FEBS Lett. 266, 187-191, 1990
A;Title: Cloning and expression of a cDNA encoding a novel human neurotrophic A;Reference number: S10719; MUID:90306351; PMID:2365067
A;A;Accession: S10719
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A;Title: Human and rat brain-derived neurotrophic factor A;Reference number: A40304; MUID:91365361; PMID:1889806
A;Accession: C40304
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A; Residues: 1-257 <J
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A; Cross-references: GDB: 125917; OMIM: 162660
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A; Residues: 1-73,'Q',75-77,'R',79-108,'T',110-257 <YAN>
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A; Residues: 1-257 <KAI>
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A; Residues: 1-257 <MAI>
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A; Residues: 1-257 <ROS>
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                                                                                                                                                                                           TVLGEIKTGNSPVKQYEYETRCKEARPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNK
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                                                                                                                                                    QAAWRFIRIDTACVCVLSRKAVR 240
                                                                                                                                                                                                                        MVLGEVNINNSVEKQYFFETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTEVKALTMD-GK
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Pred. No. 1e-37;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 257;
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A;Cross-references: GB:X53257; NID:g53451; PIDN:CAA37348.1; PID:g53452 R;KOlbeck, R.; Jungbluth, S.; Barde, Y.A.
Eur. J. Blochem. 225, 995-1003, 1994
A;Title: Characterisation of neurotrophin dimers and monomers.
A;Reference number: S51179; MUID:95045576; PMID:7957235
A;Accession: S51179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Mus musculus (house mouse)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 16-Jul-1999
C;Accession: S09155; S51179
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Nature 344, 339-341, 1990
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                                                                                                      EDYVGNPVVANRTSPRRKRYAEHK-SHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGE
                                                                                                                                                                                                     DFEVGGAAPFNRTH-RSKRSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGE 163
                                                                                                                                                                                                                                              STLPKAEAPREPEQGEATRSEFQPMIATDTELLRQQRRYNSPRVLLSDSTPLEPPPLYLM 120
  WIRIDTSCVCALSRKIGR
                                        FIRIDTACVCVLSRKAVR 240
                                                                                IKTGNSPVKQYFYETRCKEARPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWR
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108; Conserv
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Pred. No. 8e-37;
33; Mismatches 9
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Search completed: December Job time: 20.2919 secs 2002, 15:13:57

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NT7_CYPCA
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## ALIGNMENTS

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21-JUL-1986 (Rel. (
01-JAN-1990 (Rel. 1
16-OCT-2001 (Rel. 4
Beta-nerve growth 1
This SWISS-PROT entry is copyright. It is produced through a copyrend the swiss institute of Bioinformatics and the EMBL the European Bioinformatics institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entitles requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                            novel member abundantly expressed in Xenopus ovary.";

Neuron 6:845-858(1991).

PEURCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERVOUS SYSTEMS. IT STIMULATES DIVISION AND DIFFERENTIATION OF SYMPATHETIC AND EMBRYONIC SENSORY NEURONS.

SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT FORCES.

SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIINE-84206565; PubMed-6327169;
Ullrich A., Gray A., Berman C., Coussens L., Dull T.J.;
"Sequence homology of human and mouse beta-NGF subunit genes.";
Cold Spring Harb. Symp. Quant. Biol. 48:435-442(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hallboeok F., Ibanez C.F., Persson H.;
Hallboeok F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Leukocyte;
MEDLINE-91222573; PubMed-2025430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-90326556; PubMed-2374737;
BOTSAN1 G., Pizzuti A., Rugarli E.I.,
Sidoli A., Scarlato G., Barelle F.E.;
"CDNA sequence of human beta-NGF.";
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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factor precursor (Beta-NGF).
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gene sequence highly homologous
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EMBL; M21062; AAA59931.1; -
EMBL; M22599; CAA36832.1; -
PIR; A01399; NGHUBM.
PIR; S10253; S10253;
HSSP; P01139; IBET.
Genew; HGNC:7808; NGFB.
[1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN-Large white; TISSUE-Blood;
STRAINE-94313891; PubMed-8039422;
Lahbib-Mansais Y., Mellink C., Yerle M., Gellin J.;
"A new marker (NGFB) on pig chromosome 4, isolated consensus sequence conserved among species.";
consensus sequence conserved among species.";
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                                                     Rattus norvegicus (Rattus norvegicus) (Rattus eukaryota; Metazoa; Camammalia; Eutheria; RCBI_TaxID=10116;
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P25427;
01-MAY-1992
01-FEB-1996
01-NOV-1997
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   SEQUENCE FROM N.A. MEDLINE-89037223;
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SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALE SIMULARITY: BELONGS TO THE NGF-BETA FAMILY.
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6 (Rel. 33, Last sequence update)
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growth factor precursor (Beta-NGF)
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Hallboecek F., Ibanez C.F., Persson H.;
Hallboecek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family reveal a
novel member abundantly expressed in Xenopus ovary.";
Neuron 6:845-858(1991).
-I- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT
MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERVOUS SYSTEMS. IT
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HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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"Rat beta-nerve growth
adult hippocampus.";
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                                                                                     DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
                                                                                                                                             RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
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01-JAN-1990 (Rel.
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15-JUL-1998 (Rel.
Beta-nerve growth)
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EMBL; M26809; AAA30666.1;
PIR; A26312; A26312.
HSSP; P01139; IBET.
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Elduque C., Laurent P., Hayes H.,
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36, Last sequence update)
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factor precursor (Beta-NG
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                                   86.6%;
90.7%;
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    Pred. No. le-
7; Mismatches
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                                           No. 1e-97;
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                                                                              DB 1;
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    14;
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NERVOUS SYSTEMS. IT
SYMPATHETIC AND
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                                                                                   Length
                                                                                                                                                                                                                                                                                                                                        .) (POTENTIAL).
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21-JUL-1986 (Rel. (
01-JAN-1990 (Rel. 1
16-OCT-2001 (Rel. )
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Eukaryota; Metazoa; C
Mammalia; Eutheria; R
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

MEDLINE-84206565; PubMed-6327169;

MIDITICH A., Gray A., Berman C., Coussens L., Dull T.J.;

"Sequence homology of human and mouse beta-NGF subunit cold Spring Harb. Symp. Quant. Biol. 48:435-442(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE-83167518; PubMed-6336309; Scott J., Selby M.J., Urdea M.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of mouse
                                                                                                                              Angeletti R.H., Hermodson M.A., "Amino acid sequences of mouse
                                                                                                                                                                                                                                                                    MEDIINE-93264918; PubMed-1284621; Yamamoto T., Yamakuni T., Okabe N., "Production and secretion of nerve muscle cell line, G8-1.";
                                                                                                                                                                                                                                                                        muscle
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"Mouse nerve growth factor gene: structure
Mol. Cell. Biol. 7:3057-3064(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-C57BL/6; T: MEDLINE-88038855;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Isolation and nucleotide sequence of mouse nerve growth factor."; Nature 302:538-540(1983).
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                           X-RAY
                                                                                                                                                                              MEDLINE-73075048;
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                                                                                                                                                                                                     SEQUENCE OF 122-239
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                       CRYSTALLOGRAPHY
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                                    on and characterization of the thermolytic complete covalent structure."; istry 12:100-115(1973).
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5; PubMed=3670305;
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h factor precursor (
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Sciurognathi; Muridae;
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Structure 5:1275-1285(1997)
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STRAIN-Swiss Webster; TISSUE-Submaxillary
MEDLINE-98035451; PubMed-9351801;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-94260545; PubMed-8201620;
Holland D.R., Cousens L.S., Meng W., Matthews B.
"Nerve growth factor in different crystal forms
flexibility and reveals zinc binding sites.";
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                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                               PRINTS; PR00268; NGF. ProDom; PD002052; NGF. SMART; SM00140; NGF;
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Structure of mouse 7S
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L; V00836; CAA24221

L; W101759; AAA39820

L; M17296; AAA37687

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L; M17297; AAA37687

L; M297; AAA37687

L; S62089; CAB32081; A01400; NGMSMG.

; LBET; 31-MAY-94.

; LBTG; 08-MAR-96.

; LSGEF; 27-MAY-96.

; LSGEF; 27-MAY-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR MAINTENANCE OF THE SYMPATHETIC AND SENSORY WER STIMULATES DIVISION AND DIFFERENTIATION OF SYMEMEMERYONIC SENSORY NEURONS.
SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no restrictly by non-profit institutions as long as its content
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                 Similarity
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CAA24221.1;
AAA39820.1;
AAA39821.1;
AAA37687.1;
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CAB32081.
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Score 1096; D
Pred. No. 9.6e
.4; Mismatches
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LSRKATRRG -> CSAGRLQEEA
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01-NOV-1990 (Rel. 1
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Beta-nerve growth f
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DISULFID
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P19093;
01-NOV-1990
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviic
                                                                                                                                                                                                                                     CARBOHYD
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HSSP; P01139; 1BET.
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ASNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR
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                                                                                                                                               l Similarity
207; Conserv
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n; PD002052; NGF; 1.
SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                 factor;
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                                                                                                                                               Conservative
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16, Last sequence update)
35, Last annotation update)
factor precursor (Beta-NGF)
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BY SIMILARITY.

BY SIMILARITY.

(BY SIMILARITY.

                                                                                                                                           Score 1092; DB 1;
Pred. No. 2.3e-96;
0; Mismatches 23;
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RESULT 7

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01-FEB-1991 (Rel. 1
01-NOV-1997 (Rel. 3
Beta-nerve growth f
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SEQUENCE
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InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gene
                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fahnestock M., Bell R.A.;
"Molecular cloning of a cDNA encoding
precursor from Mastomys natalensis.";
                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                       Growth
                                                                                                                                                                                                                                                                                                                                                                                      SMART;
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Praomys natalensis
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                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                            PROPEP
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Mar
Local s.
200;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT FORCES SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT MAINTENANCE OF THE SYMPACHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF EMBRYONIC SENSORY NEURONS.
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                                    Similarity
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241 AA;
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17, Last sequence up
35, Last annotation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (African soft-furred rat) (Mastomys natalensis). Chordata; Craniata; Vertebrata; Euteleostomi;
                               84.0%;
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               17;
             Score 1073; D
Pred. No. 1.5e
17; Mismatches
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BY SIMILARITY.
BY SIMILARITY.
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             ; DB 1;
1.5e-94;
hes 23;
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P05200;
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Auffray C.;
"Molecular cloning of the avian transcription in brain.";
rrms Lett. 203:82-86(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Molecular cloning of bovine and chick nerve growth factor (NGF): delineation of conserved and unconserved domains and their relationship to the biological activity and antigenicity of NGF." EMBO J. 5:1489-1493(1986).
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Eukaryota; Metazoa; Chor
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                                                                                                                                                                                                    Hallboeoek F., Ibanez C.F., Persson H.;

"Evolutionary studies of the nerve growth factor family reveal a novel member abundantly expressed in Xenopus ovary.";

Neuron 6:845-858(1991).

- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT STIMULATES DIVISION AND DIFFERENTIATION OF SYMPATHETIC AND EMBRYONIC SENSORY NEURONS.
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Ween the Swiss Institute of Bioinformatics and the Buropean Bioinformatics Institute. There are no by non-profit institutions as long as its contified and this statement is not removed. Usage by an area of the statement of the statement (See http://www.
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41 or precursor (Beta-NGF).
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EMBL; X04067; CAA27703.1; -.
EMBL; M26810; AAA48984.1; -.
PIR; A24857; A24857.
PIR; A26311; A26311.
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SMART; SM00140; NGF; 1.
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15-DEC-1998 (Rel. 37, Last annotation up
15-DEC-1998 (Rel. 37, Last annotation up
Nerve growth factor precursor (NGF).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata;
                                                                                               Carriero F., Campioni M., Cardinali B., "Structure and expression of the nerve cocytes and embryos.";
                                                                                                                                                                                                                         Amphibia; Batrachia; Anura; Mesobatrachia;
xenopodinae; Xenopus.
NCBI_TaxID=8355;
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MEDLINE-91222573; PubMed-2025430;
                     TISSUE-Liver;
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HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF; 1.
PRODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
NGF_BUNMU
P34128;
01-FEB-1994
01-FEB-1994
15-JUN-2002
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"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";

Neuron 6:845-858(1991).

-I- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENTATION OF SYMPATHETIC AND SENSORY NERVOUS SYSTEMS.

STIMULATES DIVISION AND DIFFERENTIATION OF SYMPATHETIC AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBRYONIC SENSORY NEURONS.
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                                                                                                                                                                                                                                                             FETKCRDPKPVSSGCRGIDAKHWNSYCTTTHTFVKALTMEGKQAAWRFIRIDTACVCVLS
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(Rel.
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Last sequence
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sequence up
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POTENTIAL.
NERVE GROWTH FACTOR.
BY SIMILARITY.
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OF SIMILARITY.
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OF SIMIL
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Pred. No. 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Panse J.M., Garnier J.M.;

"Molecular cloning of a cDNA encoding

from the Krait, Bungarus multicinctus

Growth Factors 8:77-86(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nerve growth factor precursor (NGF).

Bungarus multicinctus (Many-banded krait).

Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2; PS50270; NGF_2; PS50270; Signal.
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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239
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SUBUNIT: HOMODIMER.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                        K 239
                                                                                         MSMLFYTLITAFLIGIQAEPHSESNVPAG----HTIPQVHWTKIQHSLDTALRRARSAPA 57
                      K 237
                                                                                                                                                                                       MSMLCYTLIIAFLIGIWAAPKSEDNVPLGSPAKSDFSDTNCAQTHEGLKTSRNTDQHHPT
                                               ETKCRNPNPVPSGCRGIDSRHWNSYCTTTDTFVKALTMEGNRASWRFIRIDTACVCVISR
                                                          ETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSR
                                                                                                                                                                                                                                   al Similarity
137; Conserv
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27514 MW;
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56.8%;
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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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Pred. No. 7.4e-57;
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Y SIMILARITY.
Y SIMILARITY.
E33F64B142179A08 CRC64;
                                                                                                                                                                                                                                    Mismatches
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                                                                                                                                                                                                                                                           DB 1;
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Best Local S
Matches 83
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"Purification and amino-acid sequence of a nerve of the venom of Vipera russelli russelli.";
Biochim. Biophys. Acta 1160:287-292(1992).
-i- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR ALINTENANCE OF THE SYMPATHETIC AND SENSORY NEI STIMULATES DIVISION AND DIFFERENTIATION OF SYLEMBRYONIC SENSORY NEURONS AS WELL AS BASAL FOR EMBRYONIS IN THE BRAIN.
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PRODOM; PD002052; NGF: 1.
SMART; SM00140; NGF: 1.
PROSITE; PS00248; NGF: 2: 1.
PROSITE; PS50270; NGF: 2: 1.
Glycoprotein; Growth factor.
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P30894;
Ol-JUL-1993 (Rel. 26, Last sequence update)
Ol-JUL-1993 (Rel. 25, Last sequence update)
Ol-NOV-1997 (Rel. 35, Last annotation update)
Narve growth factor (NGF).
Daboia russelli russelli (Russell's viper)
Daboia russelli russelli (Russell's viper)
Daboia russelli russelli (Russell's viper)
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Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Viperinae; Daboia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -1- SUBUNIT: HOMODIMER.
-1- SIMILARITY: BELONGS TO PIR; $28161: $29167
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InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                         NGF_XIPMA P34129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Glycoprotein;
                                                                                                                                                                01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Nerve growth factor precursor (NGF).
Xiphophorus maculatus (Southern platyfish).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neotele Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Cyprinodontiformes; Poeciliidae; Xiphophorus.
  SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186
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117 AA;
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N-LINKED (GLCNAC. . .).
N-64559C5FEC11F66 CRC64;
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Pred. No. 4.4e-39;
                                                                                                                                                                                                                                                                                                                       PRT;
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ata; Vertebrata; Euteleostomi;
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                                                                                                                                                 Vertebrata; Euteleostomi;
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Gotz R., Raulf F., Schartl M.;
"Brain-derived neurotrophic facto
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SEQUENCE
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prosite; ps50270; NGF_2;
Growth factor; Signal.
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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                                                                                                                                                                          P20783;
01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR002072; NGF.
SEQUENCE FROM
                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                            NT3_HUMAN
                                     NCBI_TaxID-9606;
                                                                                                                                                (Nerve growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBUNIT: HOMODIMER. SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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Psychiatr.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS).
MEDLINE-95217877; PubMed-7703225;
Robinson R.C., Radzlejewski C., Stuart D.I.,
"Structure of the brain-derived neurotrophic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hallboeoek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family novel member abundantly expressed in Xenopus ovary.";
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Genomics 10:558-568(1991).
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Belluscio L., de la Monte S.M., Squinto
Yancopoulos G.D.;
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MEDLINE=91045937; PubMed=2236018;
Jones K.R., Reichardt L.F.;
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factor.":
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                 SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                         does not seem to be the case.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                             TISSUE SPECIFICITY: BRAIN AND PERIPHERAL TISSUES. POLYMORPHISM: Variant Glu-76 (frequently reported thought to be associated with severe forms of sch
                                                                                                                                                                                                                        PROPRIOCEPTIVE SENSORY NEURONS SUBCELLULAR LOCATION: Secreted
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chiatr. Genet. 6:13-15(1996).
FUNCTION: SEEMS TO PROMOTES THE
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PRINTS; PR00268; NGF.
PRODOm; PD002052; NGF; 1.
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PIR; A36208; A36208.
PIR; S10719; S10719.
PIR; C40304; C40304.
     01-MAY-1992 (Rel. 22, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic
growth factor 2) (NGF-2).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertek
Amphibia; Batrachia; Anura; Mesobatrachia; Pir
                                                                                                            XENLA
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PDB; 1B8K; 09-FEB-99
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                                                                                                                                                                                                                                                                                                              MSILFYVIFLAYLRGIQGNNMDQRSLPEDSLNSLIIKLIQADILKNKLSKQMVDVKENYQ
                                                                                                                                                                                                                               PPLYLMEDYVGSPVVANRTSRRKRYAEHK-SHRGEYSVCDSESLWVTDKSSAIDIRGHQV
                                                                                                                                                                                                                                                                       STLPKAEAPREPERGGPAKSAFQPV-----IAMDTELLRQQRRYNSPRVLLSDSTPLEP
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M37763; AAA59953.1;
M61180; AAA63231.1;
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107; Conserv
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        a; Craniata; Vertebrata;
Mesobatrachia; Pipoidea;
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39A5BB3B28E25E03 CRC64;
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         Pipoidea;
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Xie K., Wang T., Olafsson P., Mizuno K., Lu B.;
"Activity-dependent expression of NT-3 in muscle cells in c
implications in the development of neuromuscular junctions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-9122573; PubMed=2025430;
Hallboeoek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family
novel member abundantly expressed in Xenopus ovary.";
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InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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TISSUE-Brain;
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SUBCELLULAR LOCATION: Secreted.
                         GEVNINNSVFKQYFFETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMD-GKQAA
                                                                                         DLDFEVGGAAPF-NRTHRSKRSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVL
                                                                                                                                                                                                      MSMLFYTLITAFLIGIQAEPHSESNVPAGH-----TIPQVHWTK---LQHSLDTALRRA 52
WRFIRIDTACVCVLSRKAVR
                                                                                                                            STIPKPQILLDLDGDDNMKQDFQPVISLEAELVKQQKQRRYKSPRVLLSDSLPLEPPPLY
                                                                                                                                                    RSAPAAAIAARVAGQTRN-----ITVDPRLF---KKRRLRSPRVLFSTQPPREAADTQ
                                                                                                                                                                               MSILFYVMFLPYLCGIHATNMDKRNLPENSMNSLFIKLIQADLLKNKISKQTVDTKENHQ
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an email to license@isb-sib.ch).
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Pred. No. 1e-37;
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MEDILINE=20211727; PubMed=10745216;
Lein E.S., Hohn A., Shatz C.J.;
"Dynamic regulation of BDNF and NT
development.";
                                                                                                                                                                                                                                                                                                             PROSITE;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Neurotrophin<sup>-3</sup> precursor (NT-3) (Neurotrophic (Nerve growth factor 2) (NGF-2).
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NINNSVFKQYFFETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMD-GKQAAWRF
                                                                                                                                      MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQV------HWTKLQHSLD 46
                                            DFEVGGAAPFNRTHRSKRSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEV
                                                                                        TALRRARSAPAAAIAARVAGQTRNIT-VDPRLFK-KRRLRSPRVLFSTQPPREAADTQDL 104
                                                                                                                MSILFYVIFLAYLRGIQGNNMDQRSLPEDSLNSLIKLIQADILKNKLSKQMVDLKENYQ
                      EDYVGSPVAANRTSRRKRYAEHK-SHRGEYSLCDSESLWVTDKSSAIDIRGHQVTVLGEI
                                                                    STLPKAEAPREPEQGEPAKSEFQPVTAMDTELLRQQRRYSSPRVLLSDSTPLEPPPLYLM
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PS50270; NGF_2;
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sp_unclassified:*
sp_rvirus:*
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  2, 2002, 15:05:42; Search time 37.449 Seconds (without alignments) 1331.501 Million cell updates/sec
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Q9uk18 homo sapien
Q9p26 homo sapien
Q9p26 homo sapien
Q9p260 goriila gor
Q9n2f1 pan troglod
Q9n2e9 pongo pygma
Q9n183 macaca fusc
Q91xb4 mus musculu
Q9dez9 crotalus du
Q90w38 bothrops ja
Q9ttc3 cervus elap
Q9p2z4 homo sapien
Q9wul5 mesocricetu
Q9188 xiphophorus
Q91988 xiphophorus
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Query Match
Best Local Similarity
Matches 240; Conserv
                                                  SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

TONG Y., Wang H.;

Submitted (MAY-199) to the EMB:
Submitted (MAY-199) to the EMB:
EMBL; AF150960; AAD55975.1; -.

HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.

PRINTS; PR00268; NGF; 1.

PRODOM; PD002052; NGF; 1.

SMART; SM00140; NGF; 1.

PROSITE; PS00248; NGF2; 1.

PROSITE; PS00270; NGF2; 1.

PROSITE; PS00270; NGF2; 1.

SEQUENCE 241 AA; 26959 MW;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID-9606;
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                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE-99256269; PubMed-10322959;
Tong Y., Wang H., Chen W.;
"Cloning and sequencing of the gene for premature beta nerve growth factor".
                                                                                                                                                                                                                                                                                                                                                                                                 NGFB
                                                                                                                                                                                                                                            Chung Kuo Ying Yung Sheng Li
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  Conservative
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99.6%;
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Last sequence update)
Last annotation updat
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              Score 1266; DB 4;
Pred. No. 6.6e-117;
                                                                                                                                                                                         EMBL/GenBank/DDBJ databases
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                                                      619DFC65EB3BD671 CRC64;
 Mismatches
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SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
SEQUENCE 241 AA; 26998 MW;
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Submitted (JAN-2000) to the EMBL; AB037517; BAA90437.1;
HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation updat
Beta-nerve growth factor (Fragment).
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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Q9N2F0
Q9N2F0;
Q9N2F0;
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Q1-OCT-2000 (TrEMBLrel. 15, C)
Q1-OCT-2000 (TrEMBLrel. 19, L)
Q1-DEC-2001 (TrEMBLrel. 19, L)
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SEQUENCE FROM N.A.

Zhang Y., Zhang B., Zhou Y., Peng X.,
Zhang Y., Zhang B., Zhou Y., Peng X.,
Submitted (AUG-2001) to the EMBL/GenBI
EMBL; AF411526; AAL05874.1; ".

InterPro; IPR002072; NGF.

Pfam; PF00243; NGF; 1.

PROSITE; PS00248; NGF_1; UNKNOWN_1.

PROSITE; PS00248; NGF_2; 1.

PROSITE; PS0270; NGF_2; 1.

SEQUENCE 241 AA; 26964 MW; 745216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              096P60;
01-DEC-2001
01-DEC-2001
01-MAR-2002
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Mammalia; Eutheria;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human
Eukaryota; Metazoa;
                                                                                                   Gorilla gorilla (gorilla).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nerve growth
                                                                                                                                          Beta-nerve growth BETA-NGF.
Kitano T., Kobayakawa "Silver Project."; Submitted (JAN-2000) t EMBL; AB037519; BAA904
                                                SEQUENCE FROM N.A. STRAIN-GORILLA-U1;
                                                                                      NCBI_TaxID=9593;
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238; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
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  BAA90439.
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Primates;
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  the 9.1;
                                                                                                                                                        (Fragment)
                                        Saitou
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Last sequence up
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EMBL/GenBank/DDBJ
                                                                                                                                                                    Last sequence up
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1258; DB 4;
Pred. No. 4.1e-116;
                                                                                                                                                                                            Created)
              EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Gorilla.
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Best Loc
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Best Local S
Matches 238
                                                                                     InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF.
PRODOm; PR002052; NGF; 1.
SMART; SW00140; NGF; 1.
PROSITE; PS00248; NGF; 1; 1.
PROSITE; PS50270; NGF; 2; 1.
NON_TER
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Q9N2F1;
Q1-QCT-2000 (TrEMBLrel. 15, Created)
Q1-QCT-2000 (TrEMBLrel. 15, Last sequence update)
Q1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                               Submitted (JAN-2000) to the EMBL; AB037518; BAA90438.1; HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                                      Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                         SEQUENCE FROM N.A. STRAIN-CHIMP-220;
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PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
                                                                                                                                                                                                                         Kitano T., Kobayakawa H.,
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                                   / Match
Local Similarity
les 237; Conserv
              N
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MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA
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241 AA;
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                                   Conservative
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                                                                              26868 MW;
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                                             97.7%;
98.3%;
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Pred. No. 3.1e-115;
                                 Score 1248; DB 6;
Pred. No. 3.9e-115;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Pan.
                                                                              B39FAA8912C00A0B CRC64;
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Best Local Similarity
Matches 237; Conserv
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Submitted (JAN-2000) to the E
EMBL; AB037520; BAA90440.1;

HSSP; P01139; IBET.
InterPro; IPR002072; NGF;
Pfam; PF00243; NGF; 1.
PRINTS; PR00286; NGF;
PRODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF; 1.
PROSITE; PS00248; NGF; 1.
PROSITE; PS00270; NGF_2; 1.
NON_TER
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SEQUENCE
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STRAIN-ORAN-U1;
Kitano T., Kobayakawa
                                                                                                                                                                                                                                                                                                                                                                Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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BETA-NGF.
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                                                                RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVIGEVNINNSVFKQYFFETKCR
                                                                                                   ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK
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241 AA;
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98.3%;
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                                                                                                                                                             Score 1247; DB 6;
Pred. No. 4.9e-115
0; Mismatches 4
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Best Local S
Matches 213
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InterPro; IPRO2072; NGF.
Pfam; PRO0243; NGF; 1.
PRINTS; PRO0268; NGF;
PRODOm; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Beta nerve growth factor (Fragment).
Macaca fuscata (Japanese macaque).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithe
Cercopithecinae; Macaca.
NCBI_TaxID-9542;
                      091XB4;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last seq)
01-JUN-2002 (TrEMBLrel. 21, Last anno
cimilar to nerve growth factor, beta
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SEQUENCE
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   musculus
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                                                                                                                                                                                                        GEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSGCR
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213; Conserv
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PS50270; NGF_2; 1.
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217 1
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                                                                                          PRELIMINARY;
   (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                             24240 MW;
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                                                                                                                                                                                                                                                                                                                                                                     88.6%;
98.2%;
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                                        Last sequence up
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Pred. No. 9.8e
0; Mismatches
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                                                                                           294
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Cercopithecidae;
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Query Match
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Strausberg R.;
Submitted (JUL-2)
                                       PRINTS; PR00268; NGF: 1.
PRODOM; PD002052; NGF: 1.
SMART; SM00140; NGF: 1.
PROSITE; PS00248; NGE-1; 1.
PROSITE; PS50270; NGF-2; 1.
SEQUENCE 241 AA; 27118 MW;
                                                                                                                                                                                                                                                                                      Q9DEZ9;
01-MAR-2001
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00243; NGF; 1.
ProDom; PD002052; NGF; 1.
PROSITE; PS00248; NGF=1; UNKNOWN_1.
PROSITE; PS00720; NGF=2; 1.
SEQUENCE 294 AA; 32326 MW; 9EE7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (JUL-2001) to the EMBL; BC011123; AAH11123.1; MGD; MGI:97321; Ngfb.
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N
                                                                                                                               Hayashi M.A.F., Radis-Baptista G., Yamane T., Camargo A.C "Cloning and sequence of a cDNA coding for a rattlesnake durissus terrificus) nerve growth factor.";
Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
EMBL, AF306533, AAG30924.1; -.
                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Crotalinae; Crotalus.
                                                                                                                                                                                                                                                       Nerve growth factor.
Crotalus durissus terrificus (South American rattlesnake)
                                                                                                                                                                                                                                                                           01-MAR-2001 (TrEMBLrel. 16,
01-MAR-2001 (TrEMBLrel. 16,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                     Q9DEZ9
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                                                                                                 Pfam; PF00243; NGF; 1.
                                                                                                                                                                                    TISSUE-VENOM GLAND;
                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                             HSSP; P01139; 1BET.
InterPro; IPR002072; NGF
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93; Conservative
           Similarity
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  Conservative
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Rodentia;
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84.6%; pred. No. 2.7e-94;
44.6%; Mismatches 21;
           59.8%;
   29;
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Last sequence update)
Last annotation updat
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           Score 713
Pred. No.
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   Mismatches
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            6e-62;
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Matches 143
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01-DEC-2001
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kashima S., Pereira J.O., Astolfi Filho S., Soares A.M., Cintra A.C.O., Giglio J.R., Franca S.C.;
"Molecular cloning and cDNA sequence of a nerve growth factor precursor from Bothrops Jararacussu venomous gland.";
Submitted (AGC-2000) to the EMBL/GenBank/DDBJ databases.
EMBL, ANO07318; AAG12169.1;
-InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
ProDom; PD00243; NGF; 1.
PROSITE; PS00270; NGF; 1.
PROSITE; PS00270; NGF; 1.
PROSITE; PS00270; NGF; 1.
PROSITE; PS00270; NGF, 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bothrops jararacussu (Jararacussu).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Crotalinae; Bothrops.
NCBI_TaxID-8726;
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                                                                                     ETKCRNPNPVPTGCRGIDARHWNSYCTTTNTFVKALTMEGNQASWRFIRIDTACVCVISR
                                                                                                                 ETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSR
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(TrEMBLrel. 19, Last sequence up
(TrEMBLrel. 20, Last annotation
urotrophic growth factor.
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ID Q9P2Z4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
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Query Match
Best Local Similarity
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Submitted (APR-1999) to the EMEMBL; AF145043; AAF17235.1; -.
HSSP; PO1139; IBET:
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS: PR002643; NGF; PRNOYS67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00268; NGF. 1.
PrODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; (Mammalia; Eutheria; (Cervidae; Cervinae; (NCBI_TaxID=109627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                           Truncated beta nerve growth fi
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence up
01-JUN-2001 (TrEMBLrel. 17, Last annotation
Beta nerve growth factor (Fragment).
                            gene in the Chinese population." Chung-Kuo I Hsueh Ko Hsueh Yuan EMBL; $76884; AAB34114.2; -. HSSP; P01139; IBET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cervus elaphus scotticus.
Cervus elaphus scotticus.
Fukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9TTC3;
01-MAY-2000
                                                                                                          SEQUENCE FROM N.A.
MEDLINE-95236507; Pubmed
Li Y., Huang B., Cai L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Suttle J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N. Robertson T.M.,
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                                                                                        "Amplification, cloning and sequencing
InterPro; IPR002072; N
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           139 SVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSGCRGIDSKHW
                                                                                                                                                                                                                                                                                                                                                                                                          NSYCTTTHTEVKALTMDGKQAAWREIR 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDGGCRGIDAKHW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87 AA;
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                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
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                                                                                                                                PubMed=7720122;
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                NGF
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Last sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 462; DB 6;
Pred. No. 4.4e-38;
1; Mismatches 2
                                                                                                                                                                                                                                             factor (Fragment).
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                                                                                                                                                                                             Catarrhini;
                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                            PRT;
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                                                                Hsueh
                                                                                                                                                                                                                                                            sequence update) annotation updat
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                                                                Pao
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                                                                16:334-338(1994)
                                                                                              beta nerve
                                                                                                                                                                                             Hominidae;
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Best Local S
Matches 89
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Best Local
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Q9N182;
01-OCT-2000 (TrEMBLrel. 15, C
01-OCT-2000 (TrEMBLrel. 15, I
01-DEC-2001 (TrEMBLrel. 19, I
Neurotrophin-3 (Fragment)
  SEQUENCE FROM N.A. TISSUE-BLOOD;
MEDLINE-99270338; FOR Okuno H., Tokuyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom; F
SMART; SM
PROSITE;
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Jansen H.T., Lehman M.N., Stevens P.J.;
Jansen H.T., Lehman M.N., Stevens P.J.;
Golden Hamster Neurotrophin and Neurotrophin
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ
EMBL; AF104239; AAD21010.1; ...
NON_TER

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01-NOV-1999 (TrEMBLrel. 12,
01-NOV-1999 (TrEMBLrel. 12,
01-DEC-2001 (TrEMBLrel. 12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nerve growth factor (Fragment).
Mesocricetus auratus (Golden hamster).
Eukaryota, Metazoa; Chordata; Craniata; Vert
Mammalia; Eutheria; Rodentia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09WU1
                                                                                            Eukaryota; Metazoa; Cho.
Mammalia; Eutheria; Pril
Cercopithecinae; Macaca
NCBI_TaxID=9542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mesocricetus
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                                                                                                                                                                            Macaca fuscata (Japanese macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
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                                                                                                                                                                                                                                                                                                                                                                                                                  ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHR
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SM00140; NGF; 1.
E; PS50270; NGF_2; 1.
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    Tokuyama
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132 AA;
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                        PubMed-10340513;
    Σ.
                                                                                                                                        Chordata;
Primates;
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94.38;
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Last
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Pred. No. 1.3e
10; Mismatches
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Pred. No. 8.6e-38;
2; Mismatches 3
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                                                                                                                                        Craniata; V
Catarrhini;
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        Hashimoto
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annotation
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                                                                                                                                        Vertebrata; Eutele
i; Cercopithecidae;
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databases.
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        Miyashita
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PROSITE; PS00248; NGF, 1.

PROSITE; PS00248; NGF, 1.

PROSITE; PS5077, NGF, 1.
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Best Local
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NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Expression of brain-derived neurotrophic factor, neurotrophin-3 their receptor messenger RNAs in monkey rhinal cortex.";

Neuroscience 0:0-0(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Quantitative evaluation of neurotrophin visual and limbic areas along the occipit in adult macaque monkeys.";
J. Comp. Neurol. 408:378-398(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF222683; AAF33791.1; -. HSSP; P20783; 1B8K. InterPro; IFR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                        Xiphophorus maculatus (Southern platyfish), and Xiphophorus helleri.

Xiphophorus helleri.

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Actinopterygii; Meopterygii; Teleostei; Euteleostei; Neotele Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Cyprinodontiformes; Poeciliidae; Xiphophorus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM
                                                                                                                                                                           01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2001 (TrEMBLrel. 17, Neurotrophin-6 precursor.
                                                                                                                                                                                                                                 091988
 "Neurotrophin-6 is a new n
Nature 372:266-269(1994).
EMBL; L36942; AAA61923.1;
EMBL; L36325; AAA61922.1;
                                                     SEQUENCE FROM N.A. MEDLINE-95059452; P. Gotz R., Koster R.,
                                           Thoenen H.;
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Interpro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF; 1.
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US-09-467-356-3
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US-08-440-049-3
US-08-441-513A-3
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PRIOR APPLICATION DATA:
APPLICATION UMBER: 07/505 AA1
FILING DAMPS
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REFERENCE/DOCKET NUMBER: SYN
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 793-3333
TELEPHONE: (303) 793-3333
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MEDIUM TYPE: Diskett
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APPLICANT: Mary S. Rosendahl
TITLE OF INVENTION: Production of Biologically Active
TITLE OF INVENTION: Recombinant Neurotrophic Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 07/680,681 FILING DATE: 04-APRIL-1991
                                                                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61
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                                                                                                                                                                                                                  241 amino acids
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                                                                   Conservative
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100.0%; Pr
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                                                                  Score 1270; DB 1;
; Pred. No. 1.1e-142;
0; Mismatches 0;
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US-08-451-947-5
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                                                              ; TYPE: amino acid ; TOPOLOGY: linear US-08-451-947-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 5, App. 10. 5702906
Query Match 99.5%; Score 1270; DB 1; Best Local Similarity 100.0%; Pred. No. 1.1e-142; Matches 241; Conservative 0; Mismatches 0;
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                                                                                                                                        TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/451,94
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                     FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: Torchia, Timothy E
REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                              FILING DATE: 31-JAN PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
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ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: GENENTECH, APPLICANT: ROSENTHAL,
                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
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CITY: South San Francisco
STATE: California
                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 666
                                                                                                           LENGTH:
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                                                                                                              241 amino acids
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US-08-424-826A-5
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                                                         US-08-424-826A-5
 Query Match
Best Local Similarity
Matches 241; Conserv
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                                                                                                            TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                   FILING DATE: 19-Apr-1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/24
FILING DATE: 10-May-1994
                                                                                                                                                                               NAME: TOICH1A, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0666P
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/6.
FILING DATE: 31-JAN-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/424,826A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch,
                                                                                                                                                                                                                                      APPLICATION NUMBER: 07/51 FILING DATE: 25-SEP-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Rosenthal,
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CITY: South San Francisco
STATE: California
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                                                                                               LENGTH:
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                                                                                  Amino Acid
                                                                                                 241 amino acids
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    Conservative
                                                                                                                                                                     415/225-8674
99.5%; Score 1270; DB 2;
100.0%; Pred. No. 1.1e-142;
tive 0; Mismatches 0;
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                           Length 241;
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                                                                                                                                                            ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-595-043A-75
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                                                                                                                                                                                               TELEFAX: (415) 397-8338
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
                                                                                                      Query Match
Best Local Similarity
Matches 241; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 75, Application US/08595043A Patent No. 5935824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/595,043A

FILING DATE: 31-JAN-1996
                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CARROLL, PETER G.
REGISTRATION NUMBER: 32,837
                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: SG
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 705-8410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
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STREET: 220 MONTGOMERY STREET, SUITE 2200
CITY: SAN FRANCISCO
STATE: CALIFORNIA
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            62 ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
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                                                                                                        Conservative
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                                                                                                99.5%; 5c.
100.0%; Pr
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                                                                                                                  Score 1270; DB 2; Pred. No. 1.1e-142;
                                                                                                        Mismatches
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                                                                                                                                 Length 241;
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                                                                                                                                                                                                               ; TOPOLOGY: Linear US-08-970-865-1
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Patent No. 6005081
PRINTERAL INFORMATION:
                                                                                                                                                           Query Match
Best Local S
Matches 241
                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/030
FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/047
FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Winpatin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/970,865
FILING DATE: 14-NO. 6005081-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 530
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acid
                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-8674
TELEFAX: 650/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
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CITY: South
STATE: Calif
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121
                        122
                                                                                                                                                                                                                                                                                                                                  NAME: Torchia, PhD., Timothy E. REGISTRATION NUMBER: 36,700 REFERENCE/DOCKET NUMBER: P1063R2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 94080
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                                                                                                                                                                      Local Similarity
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                                                                                                     RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR 181
                                                 RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                                                                                                                                                                                                                         : 241 amino acids
Amino Acid
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                                                                                                                                                         99.5%; Score 1270; DB 3; 100.0%; Pred. No. 1.1e-142; Live 0; Mismatches 0;
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                                                                                                                                                                                   Length 241;
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RESULT 7
US-08-928-694-5
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Patent No. 6037320
                                                                                                                Matches 241;
                                                                                                                            Query Match
Best Local S
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                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 08/030
FILING DATE: 22-WAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648
FILING DATE: 31-JAN
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/928,694
FILING DATE: 12-Sep-1997
                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: POTTELECOMMUNICATION INFORMATION: TELEPHONE: 650/225-8674
TELEPHONE: 650/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4:
FILING DATE: 26-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4:
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                                                                                                                                                                                                                                                                                                                 FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TOrchia, PhD., Tim
REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 19-APR-PRIOR APPLICATION DATA:
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CLASSIFICATION:
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                                                   Local Similarity
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              ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
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19-APR-1995
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                                                                                                             99.5%; Score 1270; DB 3; 100.0%; Pred. No. 1.1e-142; tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                 Timothy E.
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US-09-363-573-1
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/047855
FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
NAME: TOTChia, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P1063R2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/970,865
FILING DATE: 14-No. 6184360-1997
APPLICATION NUMBER: 60/030838
FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 650/225-8674
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Connection)
                                                                         62
                                                                                                                                                                                                                                                                                             TYPE:
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CLASSIFICATION:
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CITY: South San Francisco
STATE: California
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                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                           2 MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61
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RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR 181
                                                         ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
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                                ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 120
                                                                                                        MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 60
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                                                                                                                                                                               99.5%; Score 1270; DB 4; 100.0%; Pred. No. 1.1e-142; tive 0; Mismatches 0;
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NGF
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RESULT 10
PCT-US91-06950-5
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; TYPE: PRT
; ORGANISM: Murine sp.
US-09-447-356-3
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Sequence 5, Application PC/TUS9106950
GENERAL INFORMATION:
APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE:
SEQ ID NO 3
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Best Local
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CURRENT FILING DATE: 1999-11-22
PRIOR APPLICATION NUMBER: 08/945,037
PRIOR FILING DATE: 1998-01-12
PRIOR APPLICATION NUMBER: GB 9508204.6
PRIOR FILING DATE: 1995-04-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: CLOSTRIDIAL TOXIN DERIVATIVES TITLE OF INVENTION: SENSORY AFFERENT FUNCTIONS FILE REFERENCE: 023223/0104
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DUGGAN, MICHAEL JOHN
SHONE, CLIFFORD CHARLES
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COUNTRY:

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                                                                                                                                                                                                                               RESULT 11
PCT-US95-05423-4
                                                          Sequence 4, Application PC/TUS9505423
GENERAL INFORMATION:
APPLICANT: Jack Lile
APPLICANT: Tadahiko Kohno
APPLICANT: Duane Bonam
APPLICANT: Mary S. Rosendahl
APPLICANT: Mary S. Rosendahl
TITLE OF INVENTION: Production of Biologically Active
TITLE OF INVENTION: Recombinant Neurotrophic Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: 910/371-7168
INFORMATION FOR SEO ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Hensley, Max D.
REGISTRATION NUMBER: 27,043
REFERENCE/DOCKET NUMBER: 6661
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/266-1994
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DDS/MS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
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APPLICATION NUMBER:
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MEDIUM TYPE: 5.25 inch,
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                             ADDRESSEE:
STREET: 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             match 99.5%; Score 1270; DB 5; 1
Local Similarity 100.0%; Pred. No. 1.1e-142;
es 241; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A 242
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
                                                                                                                                                                                                                                                                                                                                                                                                                                RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
               Englewood
Colorado
                              E: Swanson & Bratschun, L.L.C.
8400 E. Prentice Avenue, Suite
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                                  Suite 200
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PCT-US95-05423-4
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SEQUENCE CHARACTERISTICS:
LENGTH: 241 amin
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                                                                                                                                                                                                                                                                                                                     Best
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PRIOR APPLICATION DATA:
APPLICATION UNMBER: 07/505,4
FILING DATE: 06-APRIL-1990
ATTORNEY/AGENT INFORMATION:
NAME: BAITY J. SWAIDSON
REGISTRATION NUMBER: 33,215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 07/680,6
FILING DATE: 04-APPLIC-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/594,1
FILING DATE: 09-OCT-1990
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 08/24
APPLICATION NUMBER: 08/24
APPLICATION O9-MAY-1994
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SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
PRIOR APPLICATION DATA:
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MEDIUM TYPE: Diskett
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 241 A 241
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                               51
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                                                                                                                                                                                                                                        DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 241
                                                                                                                                     RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR 181
                                                          DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
                                                                                                                    RSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCR
                                                                                                                                                                                                                                                                                                      Conservative
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09-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-JULY-1993
                                                                                                                                                                                                                                                                                                     99.5%; Score 1270; DB 5; 100.0%; Pred. No. 1.1e-142; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08/087,912
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                                                                                                                                                                                                                                                                                                                                   Length 241;
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RESULT 13
US-08-440-049-3
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                                                Sequence 3, Application US/08440049 Patent No. 5728803
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Tocal Similarity
Conserv
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Patent No. 6
APPLICANT: Urfer, FAPPLICANT: Presta,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (617)523-6440
TELEX: 200291 STRE UR
INFORMATION FOR SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/074
FILING DATE: 19930604
ATTORNEY/AGENT INFORMATION:
NAME: NEUNER, George W
REGISTRATION NUMBER: 1294
REFERENCE/DOCKET NUMBER: 1294
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)523-3400
TELEFAX: (617)523-6440
TELEFAX: 20001 CTEE UB
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ADDRESSEE: DAVID G. CONLIN;
ADDRESSEE: CUSHMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: WATANABE, 'APPLICANT: YOSHITOMI, APPLICANT: SASADA, Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: SASADA, Reiko
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                                                                                                                                                                                                                 121
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                                                                                                                                                180 EARPYKNGCRGIDDKHWNSQCKTSQTYYRALTSENNKLYGWRWIRIDTSCYCALSRKIGR 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/910,691 FILING DATE: CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 130 W
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                                                                                                                                                                              DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMD-GKQAAWRFIRIDTACVCVLSRKAVR 240
                                                                                                                                                                                                              RYAEHK-SHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCK 179
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                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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   Leonard
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                                                                                                                                                                                                                                                                                                                                                                                                                       78.0%; Score 996; DB 3; 179.2%; Pred. No. 3.9e-110;
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 240;
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US-08-441-513A-3
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PRIOR APPLICATION UNMBER: 08/253937

PILING DATE: 03-JUN-1994

ATTORNEY/AGENT INFORMATION:

NAME: TOZCChia, Timothy E.

REGISTRATION NUMBER: 96,700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/08441513A Patent No. 5981480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 120;
                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Urfer, Roman
APPLICANT: Presta, Leonard
APPLICANT: Winslow, John W.
TITLE OF INVENTION: Pantrop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Winslow, TITLE OF INVENTION:
                                                                     COMPUTER READABLE FORM:
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                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                             123 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: Ami
TOPOLOGY:
MEDIUM TYPE: 3.5 inch, 1.44 Mb
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/440,049 FILING DATE: 12-May-1995 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MC-SOFFERATOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                             ZIP: 94080
                                                                                                        COUNTRY:
                                                                                                                                                                             ADDRESSEE:
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                                                                                                                                            South San Francisco
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Amino Acid
                                                                                                                            California
                                                                                                                                                           1 DNA Way
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                                                                                                            USA
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                                                                                                                                                                             Genentech, Inc
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                                                                                                                                                                                                                               Pantropic Neurotrophic Factors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51.0%; Score 651; DB 1; 100.0%; Pred. No. 1.3e-69;
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                                                     1.44 Mb floppy disk
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NUMBER OF SEQ ID NOS: 36
SEQ ID NO 31
LENGTH: 120
TYPE: PRT
ORGANISM: Homo sapiens
US-08-581-662-31
Search completed: December 2,
Job time: 17.7386 secs
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US-08-581-662-31
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                                                                                                                                                                                                                                                                                                                                                           Sequence 31, Application US/08581662
Patent No. 6121235
GEMERRAL INFORMATION:
APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
FILE REFERENCE: P0981
CURRENT APPLICATION NUMBER: US/08/581,662
CURRENT FILING DATE: 1995-12-29
                                                                                                                                                                                         Query Match 51.0%; Score 651; DB 3; Length 120 Best Local Similarity 100.0%; Pred. No. 1.3e-69; Matches 120; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 51.0%; Score 651; DB 2; Best Local Similarity 100.0%; Pred. No. 1.3e-69; Matches 120; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 120 amino acids
TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/441,513A FILING DATE: 15-May-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/253937
FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: TOICH1a, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 90905C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-8674
TELEPHONE: 650/225-887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002, 15:09:42
                                                                                                                                                                                                                           Length 120;
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
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                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
     Score
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seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                       Published_Applications_AA:*

1: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*

2: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*

3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*

5: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*

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7: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

9: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*

9: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*

10: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*

11: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*

12: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*

13: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*

14: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
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1277
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Match
               102317 seqs, 15924203 residues
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Sequence 1, Appli
Sequence 5, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 4, Appli
Sequence 6, Appli
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Sequence 3, Appli
Sequence 4, Appli
Sequence 52, Appli
Sequence 52, Appli
Sequence 6, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
304.5	306.5	309.5	310	311.5	323.5	327.5	327.5	329.5	333.5	333.5	337.5	337.5	337.5	363	373.5	376.5	383.5	383.5	383.5	387.5	387.5	387.5	387.5	387.5	387.5
23.8	4	4	24.3	4	U	LR	G	U	σ	σ	σ	σ	σ	8	29.2	9	0	0	0	0	0	0	0	0	0
130	130	120	132	119	130	120	120	168	120	120	210	120	120	247	120	120	120	120	120	118	118	118	117	117	117
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US-08-450-842-22	US-08-450-842-23	US-09-813-398-10	US-08-450-842-51	US-10-072-681-4	US-08-450-842-47	US-09-742-600-8	US-09-745-032-8	US-08-450-842-6	US-09-742-600-9	US-09-745-032-9	US-08-450-842-2	US-09-742-600-10	US-09-745-032-10	US-08-450-842-3	US-10-072-681-5	US-09-813-398-11	US-09-872-090-1	US-09-742-600-1	-745	US-09-872-090-5	US-09-742-600-5	US-09-745-032-5	US-09-872-090-7	US-09-742-600-7	US-09-745-032-7
Sequence 22, Appl	23,	•	Sequence 51, Appl	Sequence 4, Appli	Sequence 47, Appl	Sequence 8, Appli	Sequence 8, Appli	۰ ۲		Sequence 9, Appli	.~ ≱	Sequence 10, Appl	Sequence 10, Appl	Sequence 3, Appli	•	Sequence 11, Appl	Sequence 1, Appli	Ļ	ŗ	5	Ş	Sequence 5, Appli	Sequence 7, Appli	Sequence 7, Appli	Sequence 7, Appli

## ALIGNMENTS

RESULT 1 US-10-072-681-1

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; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 242
; TYPE: PRT
; ORGANISM: Homo sapien
US-10-072-681-1
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CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
PRIOR APPLICATION NUMBER: 60/03088
PRIOR FILING DATE: 1996-11-15
PRIOR FILING DATE: 1996-11-15
PRIOR FILING DATE: 1997-05-29
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 09/363573
PRIOR FILING DATE: 1997-11-14
PRIOR APPLICATION UMMBER: 09/363573
PRIOR APPLICATION NUMBER: 09/363573
PRIOR APPLICATION NUMBER: 09/3675,503
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR FILING DATE: 2000-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Burton, Louis E.
APPLICANT: Schmelzer, Charles H.
APPLICANT: Beck, Joanne T.
TITLE OF INVENTION: PURIFICATION OF NGF
                                                                                                                                                                              Query Match 100.0%; Score 1277; DB 12; Best Local Similarity 100.0%; Pred. No. 1.8e-127; Matches 242; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/10072681 Patent No. US20020137893A1
Indels
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US-08-450-842-5
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                                                                                      Query Match
Best Local Similarity
                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/450,84
FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
PRIOR APPLICATION NUMBER: 07/648482
PRIOR APPLICATION NUMBER: 07/648482
PRIOR APPLICATION NUMBER: 07/587707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: GENENTECH,
APPLICANT: ROSENTHAL,
                                                                                                                                                                                                                 TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 kb floppy
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: PC-DOS/MS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                            REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666P2ClD3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                    TYPE: ami
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                           NAME: Torchia, Timothy REGISTRATION NUMBER: 3
                                                                                                                                                                                  LENGTH:
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                           MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61
            MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 60
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                                                                          Conservative
                                                                     99.5%; scr
100.0%; Pr
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                                                                        Score 1270; DB 8;
; pred. No. 9.8e-127;
0; Mismatches 0;
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                                                                                                       Length 241;
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RESULT 3
US-09-822-263-16
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CURRENT FILING DATE: 2001-06-15
PRIOR APPLICATION NUMBER: 09/672,665
PRIOR ELING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: 60/156,745
PRIOR FILING DATE: 1999-09-30
PRIOR PPLICATION NUMBER: 60/158,942
PRIOR PPLICATION NUMBER: 60/158,942
PRIOR PILING DATE: 1999-10-06
PRIOR APPLICATION NUMBER: 60/159,248
PRIOR APPLICATION NUMBER: 60/159,248
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn
SEQ ID NO 16
LENGTH: 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. US20020036598A1
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                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Prayaga, Sudhirdas
APPLICANT: Vernet, Corine
APPLICANT: Shinkets, Richard A
APPLICANT: Burgess, Catherine
APPLICANT: Spytek, Kimberly
APPLICANT: Tchernev, Velizar T
TITLE OF INVENTION: NO. US20020036598A1el Polynucleotides
FILE REFERENCE: 15966-572 CIP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 2000-06-29
NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 24
TYPE: PRT
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                                                                                                                                                                                                                             2 MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQVHWTKLQHSLDTALRRARSAPAAAIA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/169,344 FILING DATE: 1999-12-06 APPLICATION NUMBER: 60/215,048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A 242
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ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 120
                                                                                                                                                         ARVAGQTRNITVDPRLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSK 121
                                                                                                                                                                                                           MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQAHWTKLQHSLDTALRRARSAPAAAIA 60
                                                                                                                                                                                                                                                                              240;
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Pred. No. 2.6e-126;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                    Length 241;
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US-10-072-681-2

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241 A 241

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; OTHER INFORMATION: Description of Artificial Sequence:Artifical ; OTHER INFORMATION: Protein Sequence US-09-798-338-4
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; TYPE: PRT
; ORGANISM: Homo sapien
US-10-072-681-2
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FILE REFERENCE; GENEWY.037C3
CURRENT APPLICATION NUMBER: ÚS/10/072,681
CURRENT FILING DATE: 2002-02-08
PRIOR APPLICATION NUMBER: 60/030838
PRIOR FILING DATE: 1996-11-15
PRIOR PPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 08/970865
PRIOR FILING DATE: 1997-11-14
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Best Local Similarity 99.2
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                                                                                                                                                                              APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Schiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
FILE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
FILE REFERENCE: 87662-68879
CURRENT APPLICATION NUMBER: US/09/798,338
CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin Ver. 2.0
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APPLICANT: Schmel;
APPLICANT: Beck,
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PRIOR FILING DATE: 1999-07-29
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR FILING DATE: 2000-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 6
                                                                      ORGANISM: Artificial Sequence FEATURE:
                                                                                                                    TYPE: PRT
                                                                                                                                       ENGTH: 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA 242
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Pred. No. 2e-61;
1; Mismatches
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US-09-798-338-8
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                                                                                                                                                                    Sequence 2, Application US/09798338 Patent No. US20010020086A1 GENERAL INFORMATION:
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Best Local Similarity
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APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Schense, Jason C.
APPLICANT: Sakiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS FILE REFERENCE: 8766-68879
CURRENT APPLICATION NUMBER: US/09/798,338
CURRENT FILING DATE: 2001-03-02
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APPLICANT: Schense, Jason C.
APPLICANT: Schense, Jason C.
APPLICANT: Sakiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
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CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
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SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: 87662-68879
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                                                                                                                                                                                                                                                                                                                                        193 IDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVR 240
                                                                                                                                                                                                                                                                                                                                                                                                                         133 EFSVCDSVSVMVGDKTTATDIKGKEVMVLGEVNINNSVFKQVFFETKCRDPNPVDSGCRG 192
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 DPKRLYRSRKLPVELPLIKMKP------VELE------SSSHPIFHRG 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74 DP-RLFKKRRLRSPRVLFSTQPPREAADTQDLDFEVGGAAPFNRTHRSKRSSSHPIFHRG
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                                                                                                                                                                                                                                                                                                                                                                                                     EFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSGCRG
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Pred. No. 2.9e-61;
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                                                                                                                   RESULT 9
US-09-813-398-9
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Best Local (
                                                      Sequence 9, Application US/09813398
Patent No. US20020169292A1
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 118; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 6
LENGTH: 163
TYPE: PRI
ORGANISM: Artificial Sequence
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PRIOR FILING DATE: 1998-08-27
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
FILE REFERENCE: 87662-68879
CURRENT APPLICATION NUMBER: US/09/798,338
CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
NUMBER OF SEQ. ID NOS: 9
NUMBER OF SEQ. ID NOS: 9
APPLICANT: Bruce
APPLICANT: Mariu
APPLICANT: Unive
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVR 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 182
                                                                                                                                                                                                  105
                                                                                                                                                                                                                    183 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALIMDGKQAAWRFIRIDTACVCVLSRKAVR 240
                                                                                                                                                                                                                                                                           35 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 94
                                                                                                                                                                                                PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVR
Bruce D. Weintraub
Mariusz W. Szkudlinski
University of Maryland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                                                            50.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.3%; Score 642; DB 10; 100.0%; Pred. No. 1.2e-60;
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                                                                                                                                                                                                                                                                                                                                                                              Score 642; DB 10;
Pred. No. 1.3e-60;
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                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:Artificial
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RESULT 10
US-10-072-681-3
Commence 3, AF
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                                                                                                                                                                                                            ; ORGANISM: mouse US-10-072-681-3
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PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 08/970865
PRIOR FILING DATE: 1997-11-14
PRIOR FILING DATE: 1997-11-29
PRIOR FILING DATE: 1999-07-29
PRIOR FILING DATE: 1999-07-29
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Best Local Similarity
Matches 115; Conserva
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SEQ ID NO 9
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                                                                                                                                                                                                                                                                                SOFTWARE: FastSEQ
SEQ ID NO 3
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                                                                                                                                        Query Match
Best Local Similarity
Matches 107; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/813,398 CURRENT FILING DATE: 2001-03-20 PRIOR APPLICATION NUMBER: PCT/US99/05908 PRIOR FILING DATE: 1999-03-19 PRIOR APPLICATION NUMBER: PCT/US98/19772 PRIOR FILING DATE: 1998-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS FILE REFERENCE: UOFMD.003C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: PURIFICATION OF NGF
FILE REFERENCE: GENENT.037C3
CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2000-09-29
NUMBER OF SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 121
TYPE: PRT
ORGANISM: HOMO SAPIEN
                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 09/675,503
                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 182
                                                                  183 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALIMDGKQAAWRFIRIDTACVCVLSRKAVRR 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNNINSVFKQYFFETKCRD
 62
SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schmelzer, Charles H.
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                                                                                                                                         Conservative
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95.8%;
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89.9%;
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Pred. No. 1.4e-58;
1; Mismatches 4
                                                                                                                                         Score 584; DB 12;
Pred. No. 1.2e-54;
4; Mismatches 8;
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RESULT

US-08-450-842-4

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Best Local Similarity
Matches 107; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FTITING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 257 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: TOTChia, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 667
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: Torchia, Timothy E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 31-JAN PRIOR APPLICATION DATA:
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PRIOR APPLICATION DATA:
07/648482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4.
FILING DATE: 19-APR-1995
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APPLICANT: ROSENTHAL,
                     218
                                                                                            159
                                                                                                                             115 PPLYLMEDYVGSPVVANRTSRRKRYAEHK-SHRGEYSVCDSESLWVTDKSSAIDIRGHQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 460 Point San Bruno Blvd CITY: South San Francisco
                                                                                                                                                                   99
                                                                                                                                                                                                    61 STLPKAEAPREPERGGPAKSAFQPV-----IAMDTELLRQQRRYNSPRVLLSDSTPLEP 114
                                                                                                                                                                                                                                          47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/450,842 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                           ropology: linear
                                                                                                                                                                                                                                                                                                                 2 MSMLFYTLITAFLIGIQAEPHSESNVPAGHTIPQV-----
QAAWRFIRIDTACVCVLSRKAVR 240
                                                     TVLGEIKTGNSPVKQYFYETRCKEARPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNK 233
                                                                                          MVLGEVNINNSVFKQYFFETKCRDPNPVDSGCRGIDSKHWNSYCTTTHTFVKALIMD-GK 217
                                                                                                                                                    ADTQDLDFEVGGAAPFNRTHRSKRSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEV 158
                                                                                                                                                                                                                                      TALRRA-----RSAPAAAIAARVAGQTRNITVDPRLFK-KRRLRSPRVLFSTQPPREA 98
                                                                                                                                                                                                                                                                           MSILFYVIFLAYLRGIQGNNMDQRSLPEDSLNSLIIKLIQADILKNKLSKQMVDVKENYQ 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                                37.7%; Score 481.5; DB 8 40.7%; Pred. No. 2.3e-43; tive 37; Mismatches 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARNON
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                                                                                                                                                                                                                                                                                                                                                                                     DB 8;
                                                                                                                                                                                                                                                                                                                                                      88;
                                                                                                                                                                                                                                                                                                                                                                                     Length 257;
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US-08-450-842-52
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                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                        Matches
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INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 142 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: TOXCOLIA, TIMOTHY E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 66
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
07/648482
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APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587707
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121
                                 223
                                                                                                  171
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                                                                  61
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                                                                                                                                                                                                    Local Similarity les 91; Conserv
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                   FIRIDTA--CVCVLSRKAVRRA 242
                                                                                                                                  WIRIDTACVCVCVLSRKAVRRA 142
                                                                LRQYFFETRCKADNAEEGGPGAGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWR 120
                                                                                                FKQYFFETKCRDPNPVD------SGCRGIDSKHWNSYCTTTHTFVKALTMDGK-QAAWR 222
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                                                                                                                                                                                                    35.4%; Score 452; DB 8; 1 64.1%; Pred. No. 1.3e-40; rative 12; Mismatches 17;
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RESULT 13

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                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 12
SOFTWARE: PATENTIN VET. 2
SEQ ID NO 6
LENGTH: 119
TYPE: PRT
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                                                                                                                                         30.4%;
Best Local Similarity 61.6%;
Matches 69; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 21, Application US/09848664 Patent No. US20020146414A1 GENERAL INFORMATION:
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SEQ ID NO 21
LENGTH: 72
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Best Local :
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Patent No. US20010027179A1
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A 411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
PRIOR FILING DATE: 1998-12-23
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PRIOR APPLICATION NUMBER: 09/298,084
PRIOR FILING DATE: 1999-04-22
NUMBER OF SEQ ID NOS: 31
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CURRENT FILING DATE: 2001-05-03
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APPLICANT: Hubbell, Jeffrey A.
TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growth
TITLE OF INVENTION: Factors from Heparin Containing Matrices
                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 08/684,353 PRIOR FILING DATE: 1996-07-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Boone, Thomas C. APPLICANT: Cheung, Ellen N
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ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190 CRGIDSKHWNSYCTTTHTEVKALTMD-GKQAAWREIRIDTACVCVLSRKAVR 240
                                                                                                 130 HRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSG 189
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CRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGR 118
                                                                            HRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEAAPVDNG 66
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                                                                                                                                                         ; Score 388.5; DB 1; Pred. No. 5.2e-34; 18; Mismatches 24
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RESULT 15

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; ORGANISM: Human
US-09-742-600-6
Search completed: December Job time: 9.51114 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Young, John D.

TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
TITLE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/742,600
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
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                                                                  130 HRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSG 189
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Pred. No. 5.2e-34;
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Perfect score:
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  AAW81117
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Nerve growth facto
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AAW81119	AAP61033	AAB91299	AAW90884	AAG67679	AM50301	AAG67678	AAM50300	AAU85725	AAG67677	AAB01596	AAM50303	AAR22751	AAG67676	AAM50302	AAW24145	AAR37539	AAB03347	AAR77420	AAR13064	AAP40040 .	AAP91034	AAR90531	AAR37799	AAW69725	AAR45241	AAP40038	ABB04994	AAE18904	AAB66929	AAB67865	AAY07303	AAW48886	AAW26237	AAR66688
Nerve growth facto	Human beta-nerve o		DE CELO			Amino acid sequenc	Factor XIIIa subst		acid se	growth	Nerve growth facto		Amino acid sequenc	subs		$\boldsymbol{\sigma}$		Nerve growth facto	Human NGF HindIII-	Sequence encoded b	Human nerve growth	opic neurotr	NGF. Homo		Human pre-pro nerv	ce encoded b	beta	beta nerve	NGF.	acid :		prepro-ne	prepro	Human nerve growth

## ALIGNMENTS

RESULT 1 AAW81117

AAW81117 standard; protein; 120 AA.

01-MAR-1999

(first entry)

Nerve growth factor wild type

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New variants of nerve growth factor able to bind trkC - contage specified mutations and have multiple neurotrophic activities
                           WPI; 1999-009429/01.
                                                                             29-APR-1997;
25-APR-1997;
                                                                                                      23-APR-1998;
                                                                                                                        05-NOV-1998
                                                                                                                                         W09849308-A1
                                                                                                                                                                         Nerve growth factor; trkC; neuron; neural disease; animal feed; neurotrophin assay; nerve cell culture media; neurotrophic factor; NT-3; trkA; trkB.
                                                            (GETH ) GENENTECH INC
                                                                                                                                                        Homo sapiens
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                                          Urfer R,
                                                                             97US-0841045.
97US-0845541.
                                                                                                      98WO-US08242
                                            Winslow
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RESULT 2
AAB29141
ID AAB2
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               Treating ototoxin-induced neuronal-related balance impairment and promoting vestibular ganglion neuron survival prior to, upon or a exposure to an ototoxin, comprises administering a trkB or trkC a
                                                                                                                                                                                                                                                                                                                                                                                          middle; labyrinthe
                                                                                                                                                                                                                                                                                                                                                                                                           Meniere's syndrome; myringitis; otitis media; acute vestibular neuronitis; herpes zoster ot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-terminal of neutrophic growth factor
             exposure
                                                                                                                                                                                                    29-DEC-1995;
                                                                                                                                                                                                                                         29-DEC-1995;
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99.2%;
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No. 2.3e-69;
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                     upon or after or trkC agonist
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      trkB or trkC agonist, particularly neurotrophin-4/5 (NT-4/5).
Ototoxicity-related balance impairments include Meniere's syndrome, myringitis, otitis media, acute vestibular neuronitis, herpes zosteroticus, labyrinthitis, middle or labyrinthe tumours, petrositis and otosclerosis. NT-4/5 may also be used to treat diseases induced by gram positive, gram negative and acid-fast bacteria. The present sequence is a protein used in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to treating ototoxin-induced neuronal-related balance impairment in a mammal by administering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Column 57-58; 40pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                            Nerve growth factor; NGF; trkC-binding activity; trkA; trkB; neuronal disorder; neurotrophin; variant; mutant; muteln; Bel amyotrophic lateral sclerosis; paralysis; neurodegenerative carrying disease; Alzheimer's disease; multiple sclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                     Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nerve growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAG64994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAG64994 standard;
The present invention provides a number of nerve growth tactor (Nor variants with trkC-binding activity and trkC-signal inducing activity may also be capable of binding to trkA and trkB. The variants useful in the treatment of neuronal disorders, including peripheral useful in the disorders and motor-neurone disorders, such as amyotrophic lateral
                                                                                                                                                                                                                                                                                                                                                09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                          US2001012625-A1.
                                                                                                                     Nerve growth factor variants which have trkC-binding activity and trkC-signal inducing activity, useful for treating a neural disorder a mammal such as peripheral neuropathy (e.g. diabetic peripheral
                                                                                                                                                                                WPI;
                                                                                                                                                                                                                                    (PRES/) PRESTA L G.
(URFE/) URFER R.
(WINS/) WINSLOW J W.
                                                                                                                                                                                                                                                                                                                     24-APR-1998;
                                                                                   Disclosure;
                                                                                                                                                                                                            Presta
                                                                                                                                                                                                                                                                                          25-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            al Similarity
119; Conserv
                                                                                                                                                                                2001-464388/50
                                                                                                                                                                                                           LG, Urfer R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                   Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                factor variant related protein SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                            97US-0044918
                                                                                                                                                                                                                                                                                                                       98US-0066065
                                                                                   19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98.5%;
                                                                                  34pp;
                                                                                                                                                                                                              Winslow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 648; DB pred. No. 2.3e 1; Mismatches
                                                                                   English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          648; DB 21;
No. 2.3e-69;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                           growth factor (NGF)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              kB; neuropathy;
Bell's palsy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                    disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    zoster
                                                activity.
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RESULT 4
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Best Local
          This invention relates to a matrix comprising a substrate capable of providing attachment of a heparin binding peptide (HBP), a peptide comprising a binding domain which binds heparin with high affinity, heparin or heparin-like polymer, and a protein growth factor or peptide fragment which has a domain that binds heparin with low affinity. Included in the invention is a vascular graft comprising the matrix, which is capable of supporting cell adhesion. The matrix is used for delivering low heparin binding affinity growth factor proteins or peptides in a controlled manner suitable for wound healing. The matrix can be used in an article for treating dermal wounds, and in an implantable sterilized composition capable of supporting cell adhesion. The present sequence represents a growth factor protein. The protein is used in an example illustrating that non-heparin-binding growth factors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sclerosis, Bell's palsy, and various conditions involving spinal muscuatrophy, or paralysis. They are also useful for treating other human neurodegenerative disorders, such as Jackeimer's disease, Parkinson's disease, wiltiple sclerosis, Huntington's disease, Down's Syndrome, nerve deafness, Menlere's disease and other conditions characterized by necrosis or loss of neurones, whether central,
                                                                                                                                                                                                                                                                                        Matrix for controlled release of growth factor for wound healing substrate that attaches heparin binding peptide, protein growth that bind heparin with low affinity, and heparin or heparin-like
                                                                                                                                                                                                                                            Example 5; Page 21; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-024627/03
                                                                                                                                                                                                                                                                                                                                                                                               Sakiyama SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Heparin binding; vascular graft; matrix; cell adhesion; wound healing; dermal wound; wound healing; NGF-beta.
                                                                                                                                                                                                                                                                                                                                                                                                                              (ETHZ-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB35944 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                polymer
                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peripheral, or motor neurons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NGF-beta amino
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD
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119; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and various conditions involving spinal muscular hey are also useful for treating other human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
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Pred. No. 2.3e-69;
1; Mismatches 0
 manner
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heparin-based
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                                                                                                                                                                                                                                                                                                 d healing, muc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          growth factor;
drug
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delivery
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RESULT 5
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Best Local
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     The sequence is that of a chimeric neurotrophic factor (NF) R1 which comprises the preprosequence of human brain derived neurotrophic factor (hBDNF) and the full mature sequence of human neurotrophic growth factor (hNGF). It may provide the activity of 2 NFs in a single mol. or may serve as a superagonist of an endogenous NF thereby enabling an increased biological response at lower doses. It may also be useful in targeting an active cpd. to cells responsive to NF. The design of chimeric Nfs, such as R1, which retain specific biological activity but which are directed to a subset of factor-responsive cells may enable treatment of neurological disorders but avoid the complications of more widespread activity
                                                                                                                                                                                                 New chimeric neurotrophic factors - useful in treating conditions caused by trauma, surgery, ischaemia, infect metabolic diseases, nutritional deficiency, etc.
                                                                                                                                                                          Claim 36; Fig 5; 114pp;
                                                                                                                                                                                                                                                                                                   Shooter
                                                                                                                                                                                                                                                                                                                                                                                   07-AUG-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peripheral neuropathies; Parkinson's disease; amyotrophic lateral sclerosis; nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human BDNF; brain derived neurotrophic factor; NGF;
neurotrophic growth factor; Alzheimer's disease; ageing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric neurotrophic
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                                                                                                                                                                                                                                                                                      Yancopoulous
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                                                                                                                                                                                                                                                                                                                            (REGE-) REGENERON PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                             20-FEB-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "full mature human NGF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "human BDNF preprosequence"
                                                                                                                                                                         English.
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Pred. No. 2.3e-69;
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                                                                                                                                                                                                                                                                                                   SP,
                                                                                                                                                                                                                                                                                                   Furth
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                                                                                                                                                                                                                  infection,
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Matches 119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human NGF SmaI-ApaI fragment prod
                                                                                                                                                                                                                                                                                                                                                     13-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                            JP03139285-A.
                                                                                                                                                                                                                                                                                                                                                                                                                          senile
                                                                                                                                                                                                                                                                                                                                                                                                                                       Expression vector;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR13063;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR13063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                            Sequence
                                                                                                                                                                                 Disclosure; Fig 1(1-2);
                                                                                                                                                                                                                                         N-PSDB; AAQ12638.
                                                                                                                                                                                                                                                                                                       27-JUL-1989;
                                                                                                                                                                                                                                                                                                                             20-DEC-1989;
                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                    See also AAQ12639.
                                                                                                                                   derived
                                                                                                                                                         Human
                                                                                                                                                                                                                   New yeast expression vector - used
                                                                                                                                                                                                                                                                              (TAKE ) TAKEDA CHEMICAL IND
                                                                                                                                                                                                       factor from corresp. yeast.
122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                       N
                                                                                                                                In NGF is useful as a reagent for study of the nervous system,
treatment of senile dementia. The DNA encoding this fragment
lved from the human gene or is synthesised chemically.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61
                                                                                                                                                                                                                                                       1991-218449/30
                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            al Similarity
119; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                            dementia.
                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124 AA;
                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                              Ŗ,
                                                                                                                                                                                                                                                                                                      89ЛР-0192581
                                                                                                                                                                                                                                                                                                                             89JP-0328199
                                                                                                                                                                                                                                                                                                                                                                                                                                      human nerve growth factor; yeast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virus infected cells or tumours of nervous system
                                                         98
                                                         200
                                                                                                                                                                               14pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Score 648; DB
; Pred. No. 2.4e
1; Mismatches
                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                              1;
                                                           Score
Pred.
                                                                                                                                                                                 Japanese.
                                              ced. No. 5.96 Mismatches
                                                                                                                                                                                                                    in prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 13;
.4e-69;
                                                            DB 12;
.9e-69;
                                                                                                                                                                                                                      of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 124;
                                                                      Length 241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                 Indels
                                                                                                                                                                                                                      nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                               0
                                                                                                                                                                                                                    growth
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                                               Gaps
   181
                                                                                                                                                and
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RESULT 7
AAR11474
밁
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Disulfide-bond
Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-AUG-1989;
20-DEC-1989;
13-APR-1990;
07-JUN-1990;
                                                                                                            The sequence was deduced from a clone isolated from a lambda EMBL3 genomic library prepd. from human leukocyte DNA, using a probe synthesised based on the sequence of the known human NGF gene [A. Ullrich et al., Nature 303, 821 (1983)]. The clone, betaLN2113, isolated from the library was cleaved with Smal and ApaI to remove a lkb fragment contg. the gene which was then inserted into plasmid pBluescript IIK to obtain pNGFP107G. The gene was sequenced from this plasmid using Seekhase (Blochemical). The sequence of the protein colding values found to be a contracted from the contra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP414151-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human nerve growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-APR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR11474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR11474 standard; Protein;
                                                                                                                                                                                                                                                                                                      Claim 1;
                                                                                                                                                                                                                                                                                                                                           Human nerve
reagent and
                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1991-059398/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kakinuma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                    protein coding region was found to be in complete agreement with that of Ullrich et al. The sequence was used to produce recombinant h-NGF for use in the prodn. of drugs for e.g. senile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TAKE ) TAKEDA CHEMICALS IND
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                         dementia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     senile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAQ10620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,
                                                                                                                                                                                                                                                                                                      Fig 1; 33pp;
  241
                                                                                                                                                                                                                                                                                                                                             growth factor
therapeutic dr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dementia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nakahama
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89JP-0328198.
90JP-0096252.
90JP-0147392.
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180..230
190..232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label= signal sequence 19..241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label- mature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label= pro-NGF
122..241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ζ,
                                                                                                                                                                                                                                                                                                        English.
                                                                                                                                                                                                                                                                                                                                             drug
                                                                                                                                                                                                                                                                                                                                             containing cysteine re 
rug for senile dementia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yoshimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NGF
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                                                                                                                                                                                                                                                                                                                                                                  residues
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SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61

Query Match Best Local S Matches 119

Similarity

98.5%; 99.2%;

Score 648; DB pred. No. 5.9e 1; Mismatches

DB 12; 5.9e-69; nes 0;

Length 241; Indels

0

Gaps

0

648; No. 5

119;

Conservative

1;

В

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RESULT 9
AAR13886
ID AAR1
XX
AC AAR1
XX
DT 04-D
XX
DE NGF
XX
XX
NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                              Query Match
Best Local S
Matches 119
                                                                                                                                                                                    The amino acid sequence is encoded that of human nerve growth (NGF). It may be expressed in Schizosaccharomyces pombe using glyceraldehyde-3-phosphate dehydrogenase (GLD) gene promoter.
                                                                                                                                                                                                                                                                                          30-SEP-1989;
15-DEC-1988;
12-DEC-1989;
  Nerve growth
                              04-DEC-1991
                                            AAR13886;
                                                        AAR13886 standard;
                                                                                                                                                                                                                                     Secretory prepn. of Schizosaccharomyces
                                                                                                                                                                                                                                                                                                                                                                           hNGF
               NGF with pro-region
                                                                                                                                                                                                                Disclosure; Fig 3; 12pp; Japanese
                                                                                                                                                                                                                                                                                                                                  31-JUL-1991.
                                                                                       Sequence
                                                                                                                                                                                                                               promoter region.
                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                             (TAKE ) TAKEDA
                                                                                                                                                                                                                                                                                                                      12-DEC-1989;
                                                                                                                                                                                                                                                                                                                                               JP03175976-A
                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                       Human nerve growth factor
                                                                                                                                                                                                                                                                                                                                                                                                     21-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                                                                   AAR13858;
                                                                                                                                                                                                                                                                                                                                                                                                                                AAR13858 standard; Protein;
                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                  SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61
                                                                                                                                                                                                                                                         1991-269694/37.
DB; AAQ13397.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                              Conservative
  factor;
                             (first
                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                          89JP-0253796.
88JP-0314860.
89JP-0320483.
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                                                                                                                                                                                                                                                                             CHEMICAL IND
                                                                                                                                                                                                                                                                                                                     89JP-0320483
                                                       Protein;
                            entry)
                                                                                                                                                                                                                                    animal protein - by pombe which retains
              and signal sequence.
                                                                                                                                                    98.5%;
  cerebral
                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                             즛
                                                                                                                                            Score 648; DB 12;
Pred. No. 5.9e-69;
1; Mismatches 0
 nerve system; senile; dementia;
                                                       B
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                                                                                                                                                                                                                                    culturing
DNA at 3'-terminal
                                                                                                                                              0
                                                                                                                                                          Length
                                                                                                                                              Indels
                                                                                                                                                                                                                                    of.
                                                                                                                                              0
                                                                                                                                                                                            the
                                                                                                                                                                                                   factor
                                                                                                                                            Gaps
                                                                                                                  18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                             0
RESULT 10
AAR77419
ID AAR77
XX
AC AAR77
XX
DT 10-FE
XX
DE Human
XX
KW Nerve
KW prote
XX
OS Homo
XX
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                                                                                                                                                                      Query Match
Best Local S
Matches 119
                                                                                                                                                                                                                                                                                                                                     WPI; 199
N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                       26-JUL-1990;
27-JUL-1989;
30-SEP-1989;
                                                      10-FEB-1996
                                                                   AAR77419;
                                                                                AAR77419
                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Region
                                        Human nerve
                                                                                                                                                                                                                                                                                                                                                                                                                 09-AUG-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                                                                                                          (TAKE ) TAKEDA CHEMICAL IND
                                                                                                                                                                                                                                                                                                                                                                                                   26-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                              JP03183485-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vector; expression
                                                                                                                  182
                                                                                                                                            122
                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                      1991-277586/38.
DB; AAQ13592.
                                                                                                                                                                       119;
                                                                                                                                                                            Similarity
                                                                                 standard;
                                                                                                                                                                                                  241 AA;
                                        growth factor
                                                                                                                                                                      Conservative
                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                        89JP-0192581
89JP-0253796
                                                                                                                                                                                                                                                                                                                                                                                     90JP-0196270
                                                                                                                                                                                                                                                                                                                                                                                                  90ЛР-0196270
                                                                                                                                                                                                                                                                                                                                                                                                                                           /label=
                                                                                Protein;
                                                                                                                                                                            98.5%;
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pGGN301. S. cerevisiae NA74-3A(rho-)/pGGN301 (FERM-P2532) contains the expression vector and is useful for the prodn. of human NGF. The NGF is used as a reagent to study the cerebral nerve systematic and to treat senile dementia.
Nerve growth factor; neurotrophic protein refolding; NGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A human NGF gene (obtd. from pNGF107G) or its chemically synthesised DNA were used, opt. cleaved by restriction enzymes. In the human NGF, arginine and alanine may added to the C-terminal. A fragment of pNGF107G was ligated into pGLD906-1 contg. a GLD promoter to obtain pGGN228. DNA comprising nucleotides 1-99 of this sequence and a partial sequence of pGGN228 and pGLD906-1 were ligated to obtain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Fig 1+3; 11pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             culturing yeast transformed by yeast expression vector contg. encoding DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human nerve growth factor for treating senile dementia -
                                                                                                                                                                                                                                                                                                                                                                   62 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                  PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= sig_sequence
19..28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= pro-region 29..241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 648; DB 12;
Pred. No. 5.9e-69;
1; Mismatches 0;
                                                                                                                                                                                                                     ₹
                      factor;
                         therapeutic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          obtd.
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RESULT 11
AAR66688
ID AAR66
XX AR66
XX AR66
XX Humar
XX Humar
XX Humar
XX Humar
XX Humar
XX Homo
XX Homo
XX Heey
FT Pept:
FT Pept:
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                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Process for bacterial expression of recombinant neurotrophic factor
useful for promoting the survival and maintaining phenotypic
differentiation of nerve and glial cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-JUN-1994;
09-MAY-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                       maintaining the phenotypic differentiation of nerve and glial cells, is isolated and purified. This method breaks incorrectly formed disulphide bonds and allows refolding of the factor into the correct tertiary structure required for maximum yield of full active protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The nerve growth factor (NGF) gene is expressed in Escherichia coli cells. The recombinant protein is solubilized and sulfonylated and allowed to refold in the presence of PEG and biologically active NGF, used for promoting the survival of anomalic color of the survival of anomalic colors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1995-404080/51.
N-PSDB; AAT05437.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SYNT ) SYNTEX-SYNERGEN NEUROSCIENCE JOINT VENTU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9530686-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 33-34; 57pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                        AAR66688 standard;
 Misc-difference
                       Peptide
                                                                                                               Human
                                                                                                                                  Human nerve growth factor.
                                                                                                                                                           23-AUG-1995
                                           Peptide
                                                                              Homo sapiens
                                                                                                  immunogen;
                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                       Local Similarity
es 119; Conserv
                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                         PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA
                                                                                                                                                                                                                                                                          PNPVDSGCRGIDSKHWNSYCTTTHTEVKALTMDGKQAAWREIRIDTACVCVLSRKAVRRA 121
                                                                                                               nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kohno T,
                                                                                                                                                                                                                                                                                                                                                      98.5%;
nilarity 99.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    241 AA;
                                                                                                    enzyme
                                                                                                               growth factor; hNGF;
                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94US-0266080.
94US-0240122.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-
                       /label= sig_peptide
19..121
             /label-
                                                       Location/Qualifiers
                                                                                                                                                                                                         Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lile J,
                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "mature protein"
           pro_peptide
                                                                                                                                                                                                                                                                                                                                                       Score 648; DB Pred. No. 5.9e 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                         241 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rosendahl MS;
                                                                                                                polyclonal antibody;
                                                                                                                                                                                                                                                                                                                                                                    DB 16;
.9e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the survival of and
                                                                                                                                                                                                                                                                                                                                                                               Length
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RESULT 12
AAW26237
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 Query Match

Best Local Similarity

Matches 119; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disulfide-bond
Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-FEB-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                     protein was used as an immunogen to generate a polycional antibody against hNGF. The polycional antibody can be used to detect and determine hNGF pref. by enzyme immunoassay.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-NOV-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP06317587-A
                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                               Example 1; Pages 31-33; 35pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                              Polycional antibody against human nerve growth factor (NGF) useful to detect human NGF, for diagnosis of disease
                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1995-033116/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                              (TAKE ) TAKEDA CHEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-AUG-1990;
                                                                                                                                                                                    AAW26237 standard;
                                                                                                                                                                                                                                                                                                                                                                AAQ79871 encodes
                                                                                                            Fusion protein; hydrophilic spacer; recombinant; expression system; carboxypeptidase; preproNGF.
                                                                                                                                     Human preproNGF
                                                                                                                                                     16-MAR-1998
Sgarlato
               (TECH-) TECHNOLOGENE INC
                                               31-JAN-1997;
                                                               07-AUG-1997
                                                                              WO9728272-A1
                                                                                              Homo sapiens
                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                            182
                                                                                                                                                                                                                          AAQ79871.
                                                                                                                                                                                                                                                                                                                          241 AA;
                                                                                                                                                                                                                                                                                          Conservative
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59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "corresponding 136..201 179..229
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                                                97WO-US01470
                                 96US-0595043
                                                                                                                                                                                                                                                                                                                                                                AAR66688 human nerve growth factor (hNGF),
                                                                                                                                                                                      Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 IND
                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                  98.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "corresponding
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CIL
                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                          Score 648; DB 16; pred. No. 5.9e-69; 1; Mismatches 0
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RESULT 13
AAW4886
ID AAW48
XX AW48
AC AAW48
AC AAW48
AC AAW48
AC AAW48
AC AAW48
AC AAW48
CY 12-OC
XX Human
XW Neurc
KW hydrc
XX Homo
X
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A novel recombinant vector has been developed which comprises a nucleotide sequence encoding a fusion protein. The fusion protein comprises three domains joined together in order, from N-terminus to C-terminus, of a first domain comprising a protein of interest, a second domain comprising a hydrophilic spacer and an affinity domain, each domain comprising amino acid residues. The present sequence represents human prepronGF, used in example 6 of the present invention. The recombinant vector is used for the production of authentic recombinant proteins of interest. The method of the invention is useful for the expression of fusion proteins capable of isolation by affinity chromatography in pro- or eukaryotic cells. This method allows for the efficient cleavage and generation of authentic proteins of interest that do not contain extraneous (i.e. non-naturally occurring) amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Recombinant protein expression system for fusion protein production - useful for high quantity production of authentic recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                              22-MAY-1998
                                                                                                                                                                                                                                                                                                                            Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW48886 standard; Protein; 241 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteins
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                                                                                                                                                                                        Region
                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                 Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hydrophobic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Neurotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human prepro-nerve growth factor beta chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW48886;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acids.
                                                                                 WO9821234-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1997-402624/37.
DB; AAT80162.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    n; nerve growth factor; NGF; human;
interaction chromatography.
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                                                                                                                                                                                                                                                                       /note-
179..18
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167
                                                                                                                                                               /note-
                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                       /label= Prepro_region
122..241
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99.2%;
                                                                                                                                                                                           . 231
                                                                                                                                   "conserved Cys-containing region involved
Cys knot motif"
                                                                                                                                                                                                               "conserved Cys-containing region involved Cys knot motif"
                                                                                                                                                                                                                                                                                             "N-glycosylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                purification;
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RESULT 14
AAY07303
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This polypeptide comprises the human nerve growth factor (NGF) beta chain precursor. Methods are provided for large-scale purification of neurotrophins, including mature NGF, suitable for CC clinical use. A claimed method comprises: (1) separating the neurotrophin from the other proteins using a hydrophobic interaction chromatography resin (HICR); and optionally (2) separating the neurotrophin from a chemical variant by high cc performance cation exchange chromatography (HPCEC). The processes can also be used for purification of e.g. mouse NGF (see AAW48887), CC brain-derived neurotrophic factor (see AAW48888), neurotrophin-4/5 (see AAW48890) and neurotrophin-3 (see AAW48889). The processes allow separation of neurotrophins from various undestrable misprocessed, cm.sifolded, size, glycosylated or charge forms. They allow selective separations from their variants and other molecules, and from other copolypeptides with high pr. The processes are applicable to starting materials from various sources, including fermentation or purifical or mammalian cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 119; Conserv
                                                                                                                                                          Cerebrospinal; axon; growth; mammal; spinal cord injury; lesion; NGF2; expression vector; neurotrophin; nerve growth factor 2; neurotrophin 3;
                                                                                                                                         expression vector; neurotrophin; nerve NT3; voluntary motor function
                                                                                                                                                                                                         Human nerve growth factor beta protein.
                                                                                                                                                                                                                                           06-JUL-1999
                                                                                                                                                                                                                                                                          AAY07303;
                                                                                                                                                                                                                                                                                                         AAY07303 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 4; 59pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolation of neurotrophin(s) from, e.g. mis-folded or glycosylated variant(s) - using hydrophobic interaction chromatography, optionally in combination with high performance cation exchange
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15-NOV-1996;
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                                                                           WO9900148-A2
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                                                                                                           Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                        182 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA
                                                                                                                                                                                                                                                                                                                                                                                                       62 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 AA;
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                                                                                                                                                                                                                                       (first entry)
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96US-0030838
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                                                                                                                                                                                                                                                                                                         Protein;
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                                                                                                                                                                                                                                                                                                         241
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Pred. No. 5.9e-69;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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30-JUN-1998; 07-JAN-1999.

98WO-US13778

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RESULT 15
AAB67865
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  Query Match
Best Local 9
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                                             30-SEP-1999;
06-OCT-1999;
13-OCT-1999;
06-DEC-1999;
29-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a method of inducing cerebrospinal projection (CST) axon growth in a mammal with a spinal cord injury that involves a CST lesion by delivering a recombinant expression vector for CST neurotrophin, such as this sequence - nerve growth factor beta. The method is used to induce partial recovery of voluntary motor function in a mammal after disruption of corticospinal projections in the spinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Treating spinal cord injuries in a mammal - by inducing cerebrospinal projection axons using a recombinant vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expressing
                                                                                                                                                                                                                                                      PTMA; immune deficiency; infection; autoimmune disorder; wound closu connective tissue disease; multiple sclerosis; rheumatoid arthritis; systemic lupus erythematosus; autoimmune pulmonary inflammation; ulc Guillian Barre syndrome; autoimmune thyroiditis; myasthenia gravis;
                                                                                                                                                                                                                                                                                                                                                                                           AAB67865 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
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Prayaga
                                                                                                                                              05-APR-2001
                                                                                                                                                                       WO200123572-A2
                                                                                                                                                                                                                                                                                                                   Amino acid sequence of a human polypeptide designated
                                                                                                                      29-SEP-2000;
                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                     fibrosis;
                                                                                                                                                                                                                               insulin dependent diabetes mellitus; graft-versus-host disease; autoimmune inflammatory eye disease; gut protection; gut regeneration;
                      (CURA-)
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119; Conserv
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  Vernet
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                                                2000US-0215048
                                                          99US-0156745.
99US-0158942.
99US-0159248.
99US-0169344.
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  Shimkets
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.9e-69;
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CC sequence is derived from clone ALO49825. The polypeptide is 26958.5
CC daltons. PTMA polynucleotides and polypeptides are used in the
CC manufacture of a medicament for treating a syndrome associated with a
CC human disease, the disease selected from a pathology associated with a
CC PYMA. They may be useful in the treatment of various immune deficiencies
CC and disorders. These immune deficiencies may be genetic or caused by
CC viral as well as bacterial or fungal infections or may result from
CC autoimmune disorders. Autoimmune disorders which may be treated using
CC systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary
CC inflammation, Guillian-Barre.syndrome, autoimmune thyroiditis, insulin
CC dependent diabetes mellitus, myasthenia gravis, graft-versus-host disease
CC and autoimmune inflammatory eye disease. Additionally PTMA may also be
CC useful to promote better or faster closure of non-healing wounds,
CC surgical and traumatic wounds. Furthermore, PTMA may also be useful for
CC gut protection or regeneration and treatment of lung or liver fibrosis,
CC systemic cytokine damage.
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Вþ
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                                                                  122
182
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                                                             PNPVDSGCRGIDSKHWNSYCTTTHTEVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA 121
PNPVDSGCRGIDSKHWNSYCTTTHTEVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA
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                                                                                                                                  Score 648; DB 22;
Pred. No. 5.9e-69;
1; Mismatches 0;
                                                                                                                                                                  Length 241;
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Search completed: December Job time: 24.1149 secs ν 2002, 15:08:37

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Result
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1: pir1:*
2: pir2:*
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4: pir4:*
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658
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T40522 A53102	B48088 T48029 A86211	E82064 S02392 S25111	C69806 S53637 T27665	I51599 C97322 T08577	A42687 B42687
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## ALIGNMENTS

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A;Introns: 41/3
C;Complex: nerve growth factor is composed of two alpha chains, two beta chains, & C;Complex: nerve growth factor beta chain
C;Keywords: glycoprotein; growth factor; submandibular gland
C;Keywords: signal sequence and propeptide (fragment) #status predicted <SIG>F;1-166/Domain: signal sequence and propeptide (fragment) #predicted <AMT>F;167-284/Product: nerve growth factor beta chain #status predicted <AMT>F;26,114,159,211/Binding site: carbohydrate (ABn) (covalent) #status predicted
F;181-246,224-274,234-276/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: translation not shown
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 46-286 <BOR>
A;Cross-references: EMBL:X52599; NID:g29476; PIDN:CAA36832.1; PID:g29477
C;Comment: Nerve growth factor is found in submaxillary gland in large quantities and nic sensory ganglia in vivo and in vitro and to increase cellular neurotubule levels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C:Species: Homo sapiens (man)
C;Date: 19-reb-1984 #sequence_revision
C;Accession: A01399; S10253
R;Ullrich, A: Gray, A: Berman, C:: Du
Nature 303, 821-825, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-286 <ULL>
A; Residues: 1-286 <ULL>
R; Borsani, G.; Plizzuti, A.; Rugarli, E.I.;
Nucleic Acids Res. 18, 4020, 1990
A; Title: CDNA sequence of human beta-NGF.
A; Reference number: S10253; MUID:90326556;
A; Accession: S10253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: Human beta-nerve growth factor gene sequence highly A;Reference number: A93305; MUID:83244969; PMID:6688123 A;Accession: A01399
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A;Map position: 1p13.1-1p13.1
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SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61
                                                                                             SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD
                                                                                                                                                                                           119;
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                                                                                                                                                                                                            Score 648; DB 1;
Pred. No. 1.9e-61;
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RESULT 146614

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R;Lahbib-Mansais, Y.; Mellink, C.; Yerle, M.; Gellin, J. Cytogenet. Cell Genet. 67, 120-125, 1994
A;Title: A new marker (NGFB) on pig chromosome 4, isolated A;Reference number: 146614; MUID:94313891; PMID:8039422
A;Accession: I46614
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:L31898;
C;GenetLcs:
A;Gene: NGFB
C;Superfamily: nerve growth fac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nerve growth factor beta chain precursor - bovine (fragment) C;Species: Bos primigenius taurus (cattle) C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change C;Accession: A26312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Molecular cloning of bovine and chick nerve growth factor (NGF): delineation A;Reference number: A26312; MUID:86300647; PMID:2427334 A;Accession: A26312
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A; Residues: 1-229 <LAH>
                                                                  beta-nerve growth factor - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 16-Jul-1999
C;Accession: I56570
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:M26809; NID:g163419; PIDN:AAA30666.1; C;Comment: Nerve growth factor stimulates neurite outgrowth
J. Neurosci. Res. 20, 403-410, 1988
A;Title: Rat beta-nerve growth factor sequence
A;Reference number: 156570; MUID:89037223; PMII
                                                                                                                                           RESULT
I56570
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                                                     R; Whittemore,
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Matches 113
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                                                       P.L.;
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                                                                                                                                                                                                                                                                                                                                                                     Score 628;
Pred. No. 1
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Pred. No. 1.1e-60;
                                                       Larhammar, D.G.;
                                                                                                                                                                                                                                                                                                                                                       Mismatches
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   ence and site of PMID:3184206
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                                                     Persson, H.; Gonzalez-Carvajal, M.
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                     hippoo
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nic sensory ganglia
C;Genetics:
A;Gene: NGFB

A; Molecule type: mRNA A; Residues: 1-307 < RE3>

A; Status: preliminary; translated from GB/EMBL/DDBJ

A;Cross-references: GB:M14805; NID:g200053; PIDN:AAA39821.1; PID:g200054
A;Cross-references: GB:M14805; NID:g200053; PIDN:AAA39821.1; PID:g200054
C;Comment: The active molecule is a dimer of identical chains associated by noncovale
C;Comment: Nerve growth factor is found in submaxillary gland in large quantities and
nic sensory ganglia in vivo and in vitro and to increase cellular neurotubule levels

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A; Molecule type: DNA
A; Residues: 1-245 <RES>
A; Cross-references: GB: M36589;
C; Superfamily: nerve growth fac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:V00836; NID:g53364; PIDN:CAA24221.1; PR:Ullich, A.; Gray, A.; Berman, C.; Dull, T.J. wature 303, 821-825, 1983
A;Title: Human beta-nerve growth factor gene sequence highly A;Reference number: A93305; MUID:83244969; PMID:6688123
A;Accession: A93305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nerve growth factor beta chain precursor - mouse C;Species: Mus musculus (house mouse) C;Chate: 30-Nov-1980 #sequence_revision 19-Feb-1984 #text_change 21-C;Chate: 30-Nov-1980 #sequence_revision 19-Feb-1984 #text_change 21-C;Chaccession: A93301; A93305; A90366; I49689; I52891; A01400; I49690 C;Accession: A93301; A93305; A90366; I49689; I52891; A01400; I49690 R;Scott, J; Selby, M.; Urdea, M.; Quiroga, M.; Bell, G.I.; Rutter, Nature 302, 538-540, 1983
A;Cross-references: GB.M17298; NID:g193493; PIDN:AAA37687.1; PID:g467311 R;Ullrich, A.; Gray, A.; Berman, C.H.; Coussens, L.; Dull, T.J. Cold Spring Harb. Symp. Quant. Biol. 48, 435-442, 1983 A;Title: Sequence homology of human and mouse beta-NGF subunit genes. A; Reference number: I52891; MUID:84206565; PMID:6327169 A; Accession: I52891
                                                                                                                                                                                                                       MOl. Cell. Biol. 7, 3057-3064, 1987
A; Title: Mouse nerve growth factor gene: Structure and A; Reference number: I49689; MUID:88038855; PMID:3670305 A; Accession: I49689
                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:K01759; NID:g200051; PIDN:AAA39820.1; PID:g387495
A;Note: these authors believe that Met-67 is probably the amino-terminal
R;Angeletti, R.H.; Hermodson, M.A.; Bradshaw, R.A.
Biochemistry 12, 100-115, 1973
A;Title: Amino acid sequences of mouse 2.5s nerve growth factor. II. Isol
A;Reference number: A90366; MUID:73075048; PMID:4566923
A;Accession: A90366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: Isolation and nucleotide sequence A;Reference number: A93301; MUID:83167518; A;Accession: A93301
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A; Residues: 188-216, 'N', 218-305 <ANG>
R; Selby, M.J.; Edwards, R.; Sharp, F.;
Mol. Cell. Biol. 7, 3057-3064, 1987
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A; Residues: 1-307 <ULL>
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A; Residues: 1-307 < RES>
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91.6%;
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Pred. No. 2.7e-56;
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A;Introns: 21/2; 62/3
C;Superfamily: nerve growth factor beta chain
C;Superfamily: nerve growth factor; homodimer
C;Keywords: glycoprotein; growth factor; homodimer
F;1-187/Domain: signal sequence and propeptide #status predicted <SIG>F;188-305/Product: nerve growth factor beta chain #status experimental
F;135,180/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;202-267, 245-295,255-297/Disulfide bonds: #status experimental
F;332/Binding site: carbohydrate (Asn) (covalent) #status absent
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A;Residues: I18-243 <WIO>
A;Residues: GB:D00010; GB:N00010; GB:X04067; NID:g22
A;Cross-references: GB:D00010; GB:N00010; GB:X04067; NID:g22
R;Meier, R.; Becker-Andre, M.; Goetz, R.; Heumann, R.; Shaw,
EMBO J. 5, 1489-1493, 1986
A;Title: Molecular cloning of bovine and chick nerve growth
A;Reference number: A26312; MUID:86300647; PMID:2427334
A;Accession: S00127
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A;Title: Molecular cloning of the avian beta-nerve growth fix A;Reference number: A24857; MUID:86248129; PMID:3720959
A;Accession: A24857
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F;126-243/Product: nerve
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A; Residues: 126-243 <IBA>
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                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:M26810; NID:g212446; PIDN:AAA48984.1; R;Ibanez, C.F.; Hallboeoek, F.; Ebendal, T.; Persson, H.
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A; Residues: 121-243 <MEI>
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A; Residues: 1-243 <EBE>
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                                                                                                                                                                                                      ;Superfamily: nerve growth factor beta ;Keywords: growth factor ;1-125/Domain: signal sequence #status
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TAHPVLHRGEFSVCDSVSMWVGDKTTATDIKGKEVTVLGEVNINNNVFKQYFFETKCRDP 185
                                                                                                                                                                                                                                                                                                                             preliminary
                                                                                                                    Similarity
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                                                                                              Conservative
                                                                                                                                                                                     growth
                                                                                                                 88.3%;
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90.8%;
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                                                                                                                 Score 581; DB 2; Pred. No. 2.2e-54;
                                                                                         Mismatches
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                                                                                                                                       Length 243
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Brachet, P.;
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                                                                                                                                                                                       <MAT>
                                                                                       Gaps
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Qy Qy

62

184 SSTHPVFQMGEFSVCDSVSVWVGDKTTATDIKGNEVTVLGEVNINNSVFKQYFFETKCRA

PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 120

2 SSSHPIFHRGEFSVCDSVSVWWGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61

Query Match Best Local Sir Matches 104;

Conservative

9

Mismatches

Indels

0;

Gaps

0;

Local Similarity

86.5%; 87.4%;

Score 569; DB 1; Pred. No. 5.4e-53;

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C:Superfamily: nerve growth factor beta chain
C:Keywords: glycoprotein; growth factor; hormone
F:1-121/Domain: propeptide #status predicted <PRO>
F:122-241/Product: nerve growth factor beta chain #status predicted
F:146-154/Region: receptor binding #status predicted
F:69,114/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                            A; Molecule type: mRNA
A; Residues: 1-303 <FAH>
A; Residues: 1-303 <FAH>
A; Cross-references: GB: M22748; NID: 9202514; PIDN: AAA40599.1; PID: 9202515
A; Note: It is uncertain whether Met-1 or Met-63 is the initiator
C; Superfamily; nerve growth factor beta chain
                                                                                                                                                                                                                                                                                            nerve growth factor beta chain precursor - C;Species: Mastomys natalensis C;Date: 31-Mar-1992 #sequence_revision 31-M C;Accession: JT0343 R;Fahnestock, M.; Bell, R.A. Gene 69, 257-264, 1988
C; Keywords: glycoprotein; growth factor; homodimer; submaxillary gland F;184-301/Product: nerve growth factor beta chain #status predicted <MU F;131,176,28/Binding site: carbohydrate (Asn) (covalent) #status predicted F;198-263,241-291,251-293/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nerve growth factor beta chain precursor - guinea pig
C;Species: Cavia porcellus (guinea pig)
C;Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 15-Mar-1996
                                                                                                                                                                                                                      Gene 69, 257-264, 1988
A;Title: Molecular cloning of a cDNA encoding the nerve
A;Reference number: JT0343; MUID:89172070; PMID:3234767
A;Accession: JT0343
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A; Residues: 1-241 <SCH>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Schwarz, M.A.; Fisher, D.; Bradshaw, R.A.; J. Neurochem. 52, 1203-1209, 1989
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Note: the authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Isolation and sequence of a cDNA clone of beta-nerve A;Reference number: JL0097; MUID:89177243; PMID:2926397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Accession:
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122 SSTHPVFHMGEFSVCDSVSVWVADKTTATDIKGKEVTVLAEVNVNNNVFKQYFFETKCRD 18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
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87.4%;
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Pred. No. 2.8e
7; Mismatches
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.8e-54;
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                                                      <MAT>
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C;Accession: S14481
R;Carriero, F.; Campioni, M.; Cardinali, B.; Pierandrei-Amaldi, submitted to the EMBL Data Library, October 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nerve growth factor beta chain precursor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_chang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R:Danse, J.M.; Garnier, J.M.
Growth Factors 8, 77-86, 1993
A:Title: Molecular cloning of a cDNA encoding a nerve growth
A:Reference number: I51193; MUID:93192074; PMID:7916740
A:Accession: I51193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: DNA A;Molecule type: CAR A;Residues: 1-235 <CAR A;Residues: 1-235 <CAR A;Cross-references: EMBL:X55716; NID:g64914; PIDN:CAA39249.1; PID:g64915 C;Superfamily: nerve growth factor beta chain
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C;Species: Bungarus multicinctus (many-banded krait)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #
C;Accession: I51193
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I51193
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A; Accession: S14481
                                                    nerve growth factor beta chain - Russell's viper C;Species: Vipera russell! (Russell's Viper) C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 C;Accession: S28161
R;Koyama, J.; Inoue, S.; Ikeda, K.; Hayashi, K.
                                                                                                                                                    RESULT
S28161
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Biochim. Biophys. Acta 1160, 287-292, 1992
A;Title: Purification and amino-acid sequence of a nerve
A;Reference number: S28161; MUID:93120151; PMID:1477101
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A; Residues: 1-243 <DAN>
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                                                                                                                                                                                                                                                                                                        125 NENHPVHNQGEHSVCDSISVWVTNKTKATDIKGNTVTVMVDVNLNNEVYKQYFFETKCRN
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                                                                                                                                                                                                                                                                   62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDDRQAAWRFIRIDTACVCVLTRKAPRR 302
                                                                                                                                                                                                                                                 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRK 116
                                                                                                                                                                                                                                                                                                                            SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61
                                                                                                                                                                                                                              PNPVPSGCRGIDSRHWNSYCTTTDTFVKALTMEGNRASWRFIRIDTACVCVISRK
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88.4%;
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Pred. No. 1.8e-52;
                                                                                                                                                                                                                                                                                                                                                                                                  Score 488; DB 2;
Pred. No. 1.8e-44;
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A;Title: Amino acid sequences of nerve growth factors derived A;Reference number: $13927; MUID:91138755; PMID:1995338
A;Accession: $13927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
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A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Complex: homodimer
C;Superfamily: nerve growth factor beta chain
C;Keywords: growth factor; homodimer; venom
F;14-78,56-106,66-108/Disulfide bonds: #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Accession: S13927; A01401
R;Inoue, S.; Oda, T.; Koyama, J.; Ikeda, K.; Hayashi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Naja naja naja (Indian cobra)
C;Date: 30-Nov-1980 #sequence_revision 2
                                                                                 nerve growth factor - Chinese cobra
C;Species: Naja naja atra (Chinese cobra)
C;Date: 16-Apr-1997 #sequence_revision 25-Apr-1997
C;Accession: A58566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 1-116 <INO>
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                                            R;Oda, T.; Ohta, M.; Inoue, S.;
Biochem. Int. 19, 909-917, 1989
                                                                                                                                                                                                                                      밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Experimental source: venom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-116 <HOG>
           A; Reference
                           A; Title: Amino acid sequence
                                                                                                                                                                A58566
                                                                                                                                                                               RESULT
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             number:
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               A58566;
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                                                                                                                                                                                                                                                                                                                                                                                                          70.5%;
             e of nerve growth factor purified from the MUID:90147847; PMID:2619756
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                                                                    Ikeda, K.; Furukawa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 481; DB 2;
Pred. No. 4.5e-44;
                                                                                                                                                                                                                                                                                                                                                                                                          Score 449.5;
Pred. No. 1e-
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                                                                          Hayashi,
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R;Hogue-Angeletti, R.A.; Frazier, W.A.; Jacobs, J.W.; Niall, H.D.; Bradsh Blochemistry 15, 26-34, 1976
A;Title: Purification, characterization, and partial amino acid sequence A;Reference number: A01401; MUID:76114772; PMID:1247508
A;Accession: A01401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Experimental source: venom
A;Experimental source: venom
A;Note: the source is designated as Naja naja and referred to as Indian cobra,
A;Note: the source is designated as Naja naja and referred to as Indian cobra,
A;Note: the source is designated as Naja naja and referred to as Indian cobra,
A;Note: the source: venom
A;Note: the source is designated as Naja naja and referred to as Indian cobra,
A;Note: the source is designated as Naja naja and referred to as Indian cobra,
A;Note: the source is designated as Naja naja and referred to as Indian cobra,
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A;Note: the source is designated as Naja naja and referred to as Indian cobra,
A;Note: the source is designated as Naja naja and referred to as Indian cobra,
A;Note: the source is designated as Naja n
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A; Residues: 1-11,'p',13-14,'B',16,'TBT';20-21,'GV';23-27,'N',29-31;'AS',34,'S';36-48
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                                                        VDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRK 116
                                                                                                                                                                                                                                                                 HPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVERQYFFETKCRDPNP 64
                                                                                                                                                                                                         HPVHNLGEHSVCDSVSAWV-TKTTATDIKGNTVTVMENVNLDNKVYKQYFFETKCKNPNP
EPSGCRGIDSSHWNSYCTETDTFIKALTMEGNQASWRFIRIDTACVCVITKK
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of embryonic s
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nerve growth factor beta chain precursor - southern p. C. Species: Xiphophorus maculatus (southern platyfish) C. Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #t. C. Accession: I51709; S26674 R. Gotz, R.; Raulf, F.; Schartl, M.
J. Neurochem. 59, 432-442. 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C:Keywords: growth factor; homodimer; venom
F:1-23/Domain: signal sequence #status predicted <SIG>
F:131-246/Product: nerve growth factor beta chain #status experimental
F:144-208,186-236,196-238/Disulfide bonds: #status predicted
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A;Residues: 1-246 <SEL>
R;Inoue, S: Oda, T: Koyama, J.; Ikeda, K.; Hayashi, K.
EEBS Lett. 279, 38-40, 1991
A;Title: Amino acid sequences of nerve growth factors derived from A;Reference number: S13927; MUID:91138755; PMID:1995338
A;Recession: S13965
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J. Neurosci. Res. 18, 293-298, 1987
A;Title: Cobra nerve growth factor: structure and evolutionary comparison A;Reference number: A59218; MUID:88090976; PMID:3694712
A;Accession: A59218
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                                                                                                                                          RESULT
I51709
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nerve growth factor beta chain precursor - monocled cobra C;Species: Naja naja kaouthia, Naja naja siamensis (monoc. C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_C;Accession: A59218; S13965
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A; Molecule type: protein
A; Residues: 1-116 <ODA>
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Matches 78
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                                                                                                                                                                                                                                                                                                                                                                                                                  67.7%; Score 445.5; DB 2; 69.6%; Pred. No. 6.3e-40; Live 16; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2; Length 116;
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#text_change 31-Mar-2000
                                                                   #text_change 16-Jul-1999
                                                                                                               platyfish
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A;Gene: NGF
C;Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein; growth factor
C;Keywords: signal sequence #status predicted
F;1-14/Domain: signal sequence #status predicted
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F;80-194/Product: nerve growth factor beta chain #status predicted
F;90-155,133-183,143-185/Disulfide bonds: #status predicted
F;99/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Brain-derived neurotrophic factor is more highly conserved in structure and A;Reterence number: IS1708; MUID:92333301; PMID:1629719
A;Accession: IS1709
A;Status: preliminary; translated from GB/EMBL/DDBJ
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A; Residues: 1-194 <G
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143
                                                 69
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                                                                                                                         HRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRDPNPVDSG 68
CLGIDARHWNSHCTNSHTFVRALTSSENQVAWRLIRINVACVCVLSRKS 191
                                              CRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKA 117
                                                                                               HRGVYSVCESVSVWVGNKTKATDISGKEVTVLPYVNINNVKKKQYFFETTCHSPPSGGSR 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1-194 <GOT>
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66.1%;
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Search completed: December 2, 2002, 15:13:58 Job time: 10.646 secs

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Perfect score:
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Lahbib-Mansais Y., Mellink C., Yerle M., Gellin J.;

Tahbib-Mansais Y., Mellink C., Yerle M., Gellin J.;

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Tonsensus sequence conserved among species.;

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-I-FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE
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-I-SIMILARITY: BELONGS TO THE NGT-BETA FAMILY.
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                 SEQUENCE OF 107-231 FROM N.A.

MEDLINE-86300647; PubMed-2427334;
Meier R., Becker-Andre M., Gotz R., Heumann R., Shaw A., Th
Meier R., Becker-Andre M., Gotz R.,
Molecular cloning of bovine and chick nerve growth factor
delineation of conserved and unconserved domains and their
relationship to the biological activity and antigenicity of
EMBO J. 5:1489-1493(1986).

EMBO J. 5:1489-1493(1986).

MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERVOUS SYST.
STINULATES DIVISION AND DIFFERENTIATION OF SYMPATHETIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROPEP
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                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                 Cytogenet.
[2]
                                                                                                                                          "Assignment of the beta-nerve growth factor (NGFB) chromosome 3 band q23 by in situ hybridization."; Cytogenet. Cell Genet. 77:306-307(1997).
                                                                                                                                                                                                                                                      Bovidae;
 <del>-</del>
                                                                                                                                                                          Zaragoza P.;
                                                                                                                                                                                      Elduque C.,
                                                                                                                                                                                       WEDLINE=97430845; PubMed=9284944;
Elduque C., Laurent P., Hayes H.,
                                                                                                                                                                                                             TISSUE-Blood
                                                                                                                                                                                                                      SEQUENCE FROM
                                                                                                                                                                                                                                        NCBI_TaxID=9913;
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EMBRYONIC
SUBUNIT: H
                                                                                                                                                                                                                                                                                      taurus (Bovine).
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                                                                                                                                                                                                                                                                                                                                                                                                                       PNPVDSGCRGIDSKHWNSYCTTTHTEVKALTMDGKQAAWREIRIDTACVCVLSRKAVRRA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSSHPVFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 169
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117; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            factor;
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                                                                                                                                                                                                                                                      Bovinae;
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 HOMODIMER,
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            SENSORY NEURONS
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                        FOR THE DEVELOPMENT NERVOUS SYSTEMS. IT SYMPATHETIC AND
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P25427;
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01-FEB-1996 (Rel. 3
01-NOV-1997 (Rel. 3
Beta-nerve growth f
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CHAIN
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CONFLICT
STRUETURE STRAIN-Sprague-Dawley: TISSUE-LLY STRAIN-Sprague-Dawley: TISSUE-LLY MEDLINE-91222573; PubMed-2025430; """

""" """ """ Popolek F., Ibanez C.F., Perss
                                                                                                                                    SEQUENCE FROM N.A.

MEDLINE-89037223; PubMed-3184206;
Whittemore S.R., Friedman P.L., Larhammar D.G.,
Gonzalez-Carvajal M., Holets V.R.;
                                                                                                                                                                                                                 ranumalia; Eutheria;
NCBI_TaxID=10116;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; Y09566; CAA70759.1; -. EMBL; M26809; AAA36666.1; -. PIR; A26312; A26312. HSSP; P01139; 1BET.
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                                                          SEQUENCE OF 178-219 FROM N.A.
                                                                                                           "Rat beta-nerve growth adult hippocampus.";
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                      Rattus norvegicus
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NGFB.
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Growth factor;
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pa; Chordata;
ia; Rodentia;
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NGF_2; 1.
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96.5%;
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BETA-NERVE GROWTH FACTOR.
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R -> K (IN REF. 2).
AP -> RA (IN REF. 2).
01605099291A418C CRC
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Sciurognathi; Muridae,
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(Beta-NGF).
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P01139; Q63864;
21-JUL-1986 (Rel. C
01-JAN-1990 (Rel. 1
16-OCT-2001 (Rel. 4
              SEQUENCE FROM N.A.

MEDLINE-83167518; PubMed-6336309;
SCOTT J., Selby M.J., Urdea M.S., C
"Isolation and nucleotide sequence
of mouse nerve growth factor.";
Nature 302:538-540(1983).
   Nature
[2]
                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
                                                                                                                                                                                              Mus
                                                                                                                                                                                                                             Beta-nerve
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NGFB

growth

. 01, Created)
. 13, Last sequence
. 40, Last annotation factor precursor

Last sequence update)
Last annotation updat

ion update)
(Beta-NGF).

STANDARD;

PRT;

241

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musculus (Mouse).
Trvota; Metazoa; Chordata; Metazoa; Rodentia;

Craniata; Vertebrata; Sciurognathi; Muridae.

Muridae;

Murinae;

Euteleostomi;

Quiroga

of.

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ga M.,

encoding

the

Bel1

G.I.,

Rutter W.J.; precursor

182

PNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDDKQAAWRFIRIDTACVCVLSRKAARR

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Matches
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Evolutionary Studies of The Neuron 6:845-858(1991).

-I- FUNCTION: NERVE GROWTH FACTOR IS IM-
-I- FUNCTION: THE SYMPATHETIC AND
                                                                                                                                                                                                                      PROPEP
                                                                                                                                                                                                                                   SIGNAL
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HSSP; P01139;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Evolutionary studies of the nerve growth factor family novel member abundantly expressed in Xenopus ovary.";
                                 122
         62
                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBRYONIC SENSORY NEURONS.
SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALE
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWREIRIDTACVCVLSRKAVRR
                               SSTHPVFHMGEFSVCDSVSVMVGDKTTATDIKGKEVTVLGEVNINNSVFKQYFFETKCRA
                                           SSSHPIFHRGEFSVCDSVSVWWGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD
                                                                              109;
                                                                                                                                                                                                                                             factor;
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1BET.
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BETA NERVE GROWTH FACE
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Pred. No. 7.6e
4; Mismatches
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No. 7.
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AND SENSORY
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MEDLINE-93264918; PubMed-1284621;
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Ullrich A., Gray A., Berman C., Coussens L., Dull T.J.
"Sequence homology of human and mouse beta-NGF subunit
Cold Spring Harb. Symp. Quant. Biol. 48:435-442(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ullrich A., Gray A., Bern "Human beta-nerve growth that of mouse.";
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MEDLINE-88038855; PubMed-3670305;
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Nature 303:821-825(1983).
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STRAIN-Swiss Webster; TISSUE-Submaxille
MEDLINE-98035451; PubMed-9351801;
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MEDLINE-92065986; PubMed-1956407;
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MEDLINE=73075048; PubMed=4566923;
                                                                                                                                                                                                                                                                                                                                                                       Holland D.R., Cousens L.S., Meng W., Matthews B. "Nerve growth factor in different crystal forms flexibility and reveals zinc binding sites."; J. Mol. Biol. 239:385-400(1994).
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                            entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed. Usage by
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Structure 5:1275-1285(1997)
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                                                                                                                                                       SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALE SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                 FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT MAINTENANCE OF THE SYMPATHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF EMBRYONIC SENSORY NEURONS.
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growth factor; Signal; 3D-s
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Auffray C.;
"Molecular cloning of the itranscription in brain.";
FEBS Lett. 203:82-86(1986)
                                                                                                                                                                           Eukaryota;
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                                       MEDLINE-86248129; P Wion D., Perret C.,
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86248129; PubMed-3720959;
Perret C., Frechin N., K
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SMART; SM00140; NGF; 1.
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       Beta-nerve growth
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MEDLINE-89177243; PubMed-2926397;
Schwarz M.A., Fisher D., Bradshaw R.A., Isackson in Schwarz M.A., Fisher D., Bradshaw R.A., Isackson in Tisolation and sequence of a cDNA clone of beta-number of the guinea pig prostate gland.";
J. Neurochem. 52:1203-1209(1989).
I. Neurochem. 52:1203-1209(1989).
I. NEUROCHOM. NERVE GROWTH FACTOR IND SENSORY NEW MAINTENANCE OF THE SYMPATHETIC AND SENSORY NEW STIMULATES DIVISION AND DIFFERENTIATION OF SYLEMBRYONIC SENSORY NEURONS.
                                                                                                                                                                                                                                                 01-FEB-1991 (Rel.
01-FEB-1991 (Rel.
01-NOV-1997 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00268; NGF. ProDom; PD002052; NGF; SMART; SM00140; NGF; 1.
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HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
             MEDLINE-89172070; PubMed-3234767;
Fahnestock M., Bell R.A.;
"Molecular cloning of a cDNA enco
precursor from Mastomys natalensi
                                                                  SEQUENCE FROM N A. MEDLINE-89172070;
                                                                                                                                                          Mammalia;
                                                                                                                                                                               Eukaryota;
                                                                                                                                                                                              Praomys natalensis
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                                                                                                                        NCBI_TaxID=10112;
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69:257-264(1988)
                                                                                                                                                                                                                                                                                                                                                                                                                PSPVDSGCRGIDSKHWNSYCTTTHTFVKALTTANKQAAWRFIRIDTACVCVLNRKAARR
                                                                                                                                                                                                                                                                                                                                                                                                                                     PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLLSRKAVRR
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17, Last sequence update)
35, Last annotation update)
factor precursor (Beta-NGF).
                                                                                                                                                                                              (African soft-furred rat) (Mastomys natalensis).
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               cDNA encoding
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of beta-nerve
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RESULT 9

NGF_XENLA

ID NGF_XENLA

AC P21617;

DT 01-MAY-199;

DT 15-DEC-1998

DT 15-DEC-1998

DT 15-DEC-1998

DT 15-DEC-1998

CC Eukaryota;

OC Xenopus law

OC Eukaryota;

OC Amphibla;

OC Xenopodinam

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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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InterPro; IPR002072;
Pfam; PF00243; NGF;
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                                                SEQUENCE FROM N.A.
MEDLING-91362944; PubMed-1888511;
Carriero F., Campioni M., Cardina
"Structure and expression of the cocytes and embryos.";
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                                                                                                                        Xenopodinae; Xen
NCBI_TaxID-8355;
                                                                                                                                                Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                    01-MAY-1991 (Rel. 18, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation updat
Nerve growth factor precursor (MF)
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               EQUENCE OF 170-211 FROM N.A
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6; Mismatches
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AC P34125
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DE Nerve
OS Bunga
OC Euban
OC Lepid
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Hallboeoek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
Neuron 6:845-858(1991).
-i- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT.
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or send an email to license@isb-sib.ch).
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SIGNAL
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1;
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HSSP; P01139; 1BET.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified
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          SEQUENCE FROM N.A. TISSUE-Venom gland; MEDLINE-93192074; P
                                                                                    Bungarus multicinctus (Many-banded krait).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
                                                                                                                                    01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
                                                                          Lepidosauria; Squamat
Elapidae; Bungarinae;
 Danse
                                                            NCBI_TaxID=8616;
                                                                                                                            Nerve growth factor precursor (NGF)
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SUBGNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT FORCES.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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ID NGF_D
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DT 01-W
DD NGFV
OC Eukar
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Best Local S
Matches 84
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01-JUL-1993
01-NOV-1997
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DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                 NGF_DABRR
P30894;
                MEDLINE-93120151; PubMed-1477101; Koyama J.-I., Inoue S., Ikeda K., Hayashi K.; "Purification and amino-acid sequence of a net the venom of Vipera russelli russelli."; Biochim. Biophys. Acta 1160:287-292(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Molecular cloning of a cDNA encoding a nerve growth factor precursor from the krait, Bungarus multicinctus.";
Growth Factors 8:77-86(1993).
-I- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT AND MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERVOUS SYSTEMS. IT STIMULATES DIVISION AND DIFFERENTIATION OF SYMPATHETIC AND EMBRYONIC SENSORY NEURONS AS WELL AS BASAL FOREBRAIN CHOLINERGIC
                                                                                                                                                                                               Lepidosauria; Squamata; Scler
Viperidae; Viperinae; Daboia.
NCBI_TaxID=31159;
                                                                                                                                                                                                                                  Dabola russelli russelli (Russell's viper) (Vipera russelli russelli).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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InterPro; IPR002072; NGF
Pfam; PF00243; NGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities regulres a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                          TISSUE-Venom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
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SIMILARITY: BELONGS TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NEURONS IN THE BRAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-1993 (Rel. 26, Created)
N-1993 (Rel. 26, Last sequence up
N-1997 (Rel. 35, Last annotation growth factor (NGF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRK
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73.0%;
  SYMPATHETIC
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B; Mismatches
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IS IMPORTANT
AND SENSORY
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FOR THE
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DEVELOPMENT
SYSTEMS. IT
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CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                     PRELIMINARY
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PRINTS; PR00268; NGF; 1.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00240; NGF; 1.
PROSITE; PS50270; NGF; 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                             P01140;
P01140;
21-UUL-1986 (Rel. 01, Created)
21-UUL-1986 (Rel. 18, Last sequence update)
01-MAY-1991 (Rel. 18, Last sequence update)
01-UUL-1993 (Rel. 26, Last annotation update)
Nerve growth factor (NGF).
Naja naja (Indian cobra).
Pukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Scleroglossa; Serpentes; Colubroidea;
"Purification, characterization, and partial amino acid sequence of nerve growth factor from cobra venom.";
Biochemistry 15:26-34(1976).
-i- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERVOUS SYSTEMS. IT STIMULATES DIVISION AND DIFFERNTIATION OF SYMPATHETIC AND EMBRYONIC SENSORY NEURONS AS WELL AS BASAL FOREBRAIN CHOLINERGI NEURONS IN THE BRAIN.
-i- SUBBUNIT: HOMODIMER.
-i- SIMULARITY: BELONGS TO THE NGF-BETA FAMILY.
PIR; A01401; NGNJXI.
                                                                                                                                                                                                                                                                                                                 MEDLINE-91138755; PubMed-1995338; Inoue S., Oda T., Koyama J., Ikeda K., "Amino acid sequences of nerve growth
                                                                                                                                                                                                                                                                                                                                                                                                           Lepidosauria; Squamata; Scleroglossa;
Elapidae; Elapinae; Naja.
NCBI_TaxID-35670;
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DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; S28161; S28161.
HSSP; P01139; 1BET.
                                                                                                                                                                                        Bradshaw R.A.;
                                                                                                                                                                                                                        MEDLINE=76114772; PubMed=1247508;
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-!- SUBUNIT: HOMODIMER.
-!- SUBUNIT: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                         Hogue-Angeletti R.A.,
                                                                                                                                                                                                                                                                                                       "Amino acid sequences venoms.":
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55
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107
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73.2%;
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N-LINKED (GLCN
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Best Loc
Matches
                                                         NEURONS IN THE BRAIN.
-!- SUBUNIT: HOMODIMER.
-!- SIMILARITY: BELONGS TO
PIR; S13965; S13965.
HSSP; P01139; 1BET.
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DISULFID
DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                          Ol-MAY-1991 (Rel. 18, Created)
Ol-MAY-1991 (Rel. 18, Last sequence update)
Ol-JUL-1993 (Rel. 26, Last annotation update)
Nerve growth factor (NGF).
Naja atra (Chinese cobra), and
Naja atra (Chinese cobra), and
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Elapidae; Elapinae; Naja.
CCBI_TaxID-8656, 8649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NGF_NAJAT P21377;
                       InterPro; IPR002400; GF_cysknot.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                          SPECIES-N.n.atra;
MEDLINE-90147847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00248; NGF_1; 1. PROSITE; PS50270; NGF_2; 1.
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                                                                                                                                                                                                 SPECIES-N. n. kaouthia; TISSUE-Venom; MEDLINE-91130755; PubMed-1995338; Inoue S. Oda T., Koyama J., Ikeda "Amino acid sequences of nerve grow
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                                                                                                                                                                                                                                                   SEQUENCE
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InterPro; IPR002072; NGF.
                                                                                                                                                                                                                                                                       SPECIES-N.n.atra; TISSUE-Venom; REDLINE-90147847; Pubmed-2619756; AEDLINE-90147847; Pubmed-2619756; Dda T., Ohta M., Inoue S., Ikeda K., Furukawa S., Hayashi Manino acid sequence of nerve growth factor purified from of the Formosan cobra Naja naja atra."; Biochem. Int. 19:909-917(1989).
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                                                                                                                       S Lett. 279:38-40(1991).

FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT MAINTENANCE OF THE SYMPATHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF EMBRYONIC SENSORY NEURONS AS WELL AS BASAL
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78; Conserv
PR00438; GFCYSKNOT PR00268; NGF.
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56
66
116 /
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69.6%;
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Prèd. No. 6.6e
6; Mismatches
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Y SIMILARITY.
Y SIMILARITY.
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RESULT 14

NGF XA

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Best Local S
Matches 77
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DISULFID 14
DISULFID 56
DISULFID 66
SEQUENCE 116 AJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Nerve growth factor precursor (NGF).
Xiphophorus maculatus (Southern platyfish).
Eukaryota; Metazoa; Chordata; Craniata; Furteleoste Rottinopterygii; Neopterygii; Teleostei; Euteleostei; Neotelee Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Cyprinodontiformes; Poeciliidae; Xiphophorus.
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P34129;
                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1;
PROSITE; PS50270; NGF_2;
                                                                                                                PRINTS; PR00268; NGF.
ProDom; PD002052; NGF;
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. Neurochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   structure and evolution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE-92333301; PubMed-1629719;
Gotz R., Raulf F., Schartl M.;
"Brain-derived neurotrophic factor
                                                                                                                                                                                  InterPro; IPR002072
Pfam; PF00243; NGF;
                                                                                                                                                                                                                                   EMBL; X59941;
HSSP; P01139;
                                                                                                                                                                                                                                                                                                         or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement (See http://www.isb-sib
                                                                    PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2;
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SCHUNT: HOMODIMER.
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E; PS00248;
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77; Conser
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                                                                                                                                                                                                             139; 1BET.
IPR002072; NGF.
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Pred. No. 1.8e
7; Mismatches
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Matches 72
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SEQUENCE
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Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NT3_CHICK STANDARD: PRT: 257 AA. P25433; P25433; Ol-MAY-1992 (Rel. 22, Created) Ol-DEC-1992 (Rel. 24, Last sequence update) 30-MAY-2000 (Rel. 39, Last annotation update) Neurotrophin-3 precursor (NT-3) (Neurotrophic factor) (HDNF)
                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                               InterPro; IPR002400; GF_cysknot.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                            PRINTS; PRO0438; GFCYSKNOT
PRINTS; PR00268; NGF:
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                       EMBL; M83378; AAA68880.1; -. HSSP; P20783; 1B8K.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maisonpierre P., Belluscio L., Conover J.C., "Gene sequences of chicken BDNF and NT-3."; DNA Seq. 3:49-54(1992).
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SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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Search completed: December 2, 2002, 15:12:42 Job time: 4.96483 secs

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4: sp_human:*
5: sp_inverteb:
6: sp_mammal:*
7: sp_mhc:*
8: sp_organe1:
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:
12: sp_vertebr
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Opu2f0 pongo pygma
Opu2f0 homo sapien
Opu183 macaca fusc
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185	185	184	186	185	42	42	42	85	85	85	85	85	85	85	85	85	85	42	186	324	101	247	246	246	270	177	246	249
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Q9BFK5	Q9BFK6	Q9BFJ5	Q9BFL0	Q99NV9	013118	002800	002794	002803	002801	013105	002792	013104	002798	.002795	013122	013114	002790	002802	Q9J5D9	Q9XY95	Q9TT22	Q8QG77	Q8QG74	Q8QG75	Q9YH42	Q918L2	Q8QG76	<b>Q8VHH4</b>
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## ALIGNMENTS

Š 밁 Ş Query Match Best Local S Matches 119 PRINTS; PRO0268; NGF. 1.
PrODM: PD002055; NGF. 1.
SMART; SM00140; NGF. 1.
SMOSITE; PS00248; NGF. 1.
PROSITE; PS50270; NGF. 2; 1.
NON\_TER 241 241
SEQUENCE 241 AA; 26998 MW. Q9P2Q8;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Beta-nerve growth factor (Fragment). Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AB037517; BAA90437.1; -. HSSP; P01139; 1BET. InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1. Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
MCBI\_TaxID=9606; Kitano T., Kobayakawa H., Saitou N.;
"Silver Project."; SEQUENCE FROM N.A. 62 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA 121 tch 98.5%; al Similarity 99.2%; 119; Conservative 1. 26998 MW; Score 648; DB 4; Length 241; Pred. No. 2.4e-65; 1; Mismatches 0; Indels Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo. D5531ED825D96C14 CRC64; 0 Gaps 0;

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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGE 1; 1.
PROSITE; PS50270; NGF 2; 1.
SEQUENCE 241 AA; 26959 MW;
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MEDLINE-99256269; PubMed-
Tong Y., Wang H., Chen W.
"Cloning and sequencing of factor.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-2000
01-MAY-2000
01-MAR-2002
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Submitted (MAY 1999) to the
EMBL; AFI50960; AAD55975.1;
HSSP; P01139; 1BET.
HSSP; P01739; 1RET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O9N2F1 PRELIMINARY; PRT; 241 AA. O9N2F1; O1-OCT-2000 (TrEMBLrel. 15, Last sequence up O1-DEC-2001 (TrEMBLrel. 19, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Interpro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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STRAIN-CHIMP-220; Kitano T., Kobayakawa H., Saitou N.; Kitano T., Kobayakawa H., Saitou N.; "Silver Project."; "Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AB037518; BAA90438.1; -. HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         factor
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                               BETA-NGF
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                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Pan.
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Best Local :
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF=1; 1.
PROSITE; PS50270; NGF=2; 1.
NON_TER 241 241
SEQUENCE 241 AA; 26915 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9N2F0
Q9N2F0;
01-OCT-2000
01-OCT-2000
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  Q9N2E9;
01-OCT-2000
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Beta-nerve growth
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01-OCT-2000 (TrEMBLrel. 15,
01-DEC-2001 (TrEMBLrel. 19,
Beta-nerve growth factor (F)
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                                                           Q9N2E9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kitano T., Kobayakawa H.,
"Silver Project.";
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119; Conserv
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                                                                                                                                                                                       PNPVDSGCRGIDSKHWNSYCTTTHTEVKALTMDGKQAAWREIRIDTACVCVLSRKAVRRA 121
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  (TrEMBLrel.
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                                                                PRELIMINARY;
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Pred. No. 2.4e-65;
1; Mismatches 0
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Pred. No. 2.4e-65;
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sequence

update)

01-DEC-2001 (TrEMBLrel. 19, Beta-nerve growth factor (F)

(Fragment)

Last annotation update)

BETA-NGF

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RESULT OF THE PROPERTY OF THE 
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                                                                                                                                                                                                                         Zhang Y., Zhang B., Zhou Y., Peng X.,
Submitted (AUG-2001) to the EMBL/GenB
EMBL; AF411526; AALO5874.1; -.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PrODom; PD002052; NGF; 1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS00248; NGF_2; 1.
SEQUENCE 241 AA; 26964 MM; 745216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001
01-DEC-2001
01-MAR-2002
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Mammalia; Eutheria;
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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InterPro; IPR002072; NGF.
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                                                                                SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD
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                                                             SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVSINNSVFKQYFFETKCRD
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119; Conserv
                                                                                                                                                                 Similarity
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Metazoa; Chordata; C
-..+herla; Primates; (
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th factor beta.
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                                                                                                                                                Conservative
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tazoa; Chordata;
heria; Primates;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26876 MW;
                                                                                                                                                               97.3%;
97.5%;
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Last sequence update)
Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                   Peng X., Yuan J., EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                              ű
                                                                                                                                            Score 640; DB 4
Pred. No. 2e-64;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Pongo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                DB 4;
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RESULT
Q91XB4
ID Q91XB4
AC Q9
DT Q9

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Submitted (JAN-2000) to the E
EMBL; AF222682; AAF33790.1; -
HSSP; P01139; IBET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1
PROSITE; PS50270; NGF_2; 1
                                                                                                                                                                                                                                      Q91xB4;
01-DEC-2001
01-DEC-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-9270338; PubMed=10340513;
Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Miyashita Y.,
"Quantitative evaluation of neurotrophin and trk mRNA expression
visual and limbic areas along the occipito-temporo-hippocampal pa
in adult macaque monkeys.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation updat
Beta nerve growth factor (Fragment).
                           TISSUE-SALIVARY
                                                 SEQUENCE FROM N
                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                      Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cercopithecinae; Macaca.
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                                                                                           NCBI_TaxID-10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Comp. Neurol. 408:378-398(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDT
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l (TrEMBLrel.
2 (TrEMBLrel.
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217 /
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                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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                                                                                                                                                                   (Mouse)
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                                                                                                                                                                                                                growth
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                                                                                                                      Chordata;
Rođentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24240 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87.8%;
99.1%;
                                                                                                                                                                                                           . 19, Created)
. 19, Last sequence upo
. 21, Last annotation u
h factor, beta.
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he EMBL/GenBank/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 578; DB 6;
Pred. No. 1.8e-57;
1; Mismatches 0
                                                                                                                    Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                       PRT;
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                                                                                                                                                                                                                                                                                                                                    294
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                                                                                                                                             Euteleostomi;
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SQ
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Q9DEZ9
ID Q9
AC Q9
DT 01
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Best Local S
Matches 85
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Best Local (
                                                                                                                                                                                                                                      precursor from Bothrops jararacussu venomous glai
Submitted (AUG-2000) to the EMBL/GenBank/DDBJ dai
EMBL; AY007318; AAG12169.1; -.
InterPro; IPR002072; NGF:
Pfam; PF00243; NGF; 1.
ProDom; PD002052; NGF; 1.
PROSITE; PS00248; NGF; 1.
PROSITE; PS00248; NGF; 1.
PROSITE; PS00248; NGF21; UNKNOWN_1.
SEQUENCE 241 AA; 27161 MW; AC57F724A6531A8F
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ProDom; PD002052; NGF; 1.
PROSITE; PS00248; NGF; 1. UNKNOWN_1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 294 AA; 32326 MW; 9EE7
Q9DEZ9;
Q9DEZ9;
01-MAR-2001
01-MAR-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (JUL-2001) to the EMBL, BC011123; AAH11123.1; MGD; MGI: 97321; Ngfb.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q90W38;
Q1-DEC-2001 (TrEMBLrel. 19, C
Q1-DEC-2001 (TrEMBLrel. 19, C
Q1-MAR-2002 (TrEMBLrel. 20, L
Putative neurotrophic growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR002072; NGF.
                                                                                                                                                                                                                                                                                                                                            Kashima S., Pereira J.O., Astolfi Filho S., Soares A.M., Cintra A.C.O., Giglio J.R., Franca S.C.; "Molecular cloning and cDNA sequence of a nerve growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                     Bothrops jararacussu (Jararacussu).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
                                                                                                                                                                                                                                                                                                                                                                              TISSUE-VENOM GLAND;
                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                             Viperidae; Crotalinae;
NCBI_TaxID=8726;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTA 294
                                                                                                     HPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRDPNP| | | : :|||:||:||:|||:||:||:||:|||
                                                                                                                                                   HPVHNRGEYSVCDSVNVWVANKTTATDIRGNVVTVMVDVNINNNVYKQYFFETKCRNPNP
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97; Conserv
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 (TrEMBLrel. 16, (TrEMBLrel. 16, (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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                                               PRELIMINARY;
                                                                                                                                                                                                                     JF; 1.
; NGF; 1.
8; NGF_1; UNKNOWN_1.
70; NGF_2; 1.
AA; 27161 MW; AC57;
AA; 27161 SCORE
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                                                                                                                                                                                                          75.8%;
75.9%;
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Last
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Pred. No. 1
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   sequence up
annotation
                                                241
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).3e-52;
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Query Match
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Best Local
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NCBI_TaxID-8732;
                                                                                                                             "NGF expression in Antler.";
Submitted (ApR-1999) to the ENEMBL; AF145043; AAF17235.1; -.
HSSP; P01139; IBET.
InterPro; IPR002072; NGF.
Pfam; PF002443; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-WINDM GLAND;
TISSUE-WINDM GLAND;
Hayashi M.A.F., Radis-Baptista G., Yamane T., Camargo A.C.
"Cloning and sequence of a cDNA coding for a rattlesnake (
durissus terrificus) nerve growth factor.";
Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                          Q9TTC3;
Q9TTC3;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (SEP-2000) to the EMBL; AF306533; AAG30924.1; HSSP; P01139; IBET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00140; NGF; 1.

PROSITE; PS00248; NGF_1; 1.

PROSITE; PS50270; NGF_2; 1.

SEQUENCE 241 AA; 27118 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1. PRINTS; PR00268; NGF. ProDom; PD002052; NGF; 1.
                                         NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pec Cervidae; Cervinae; Cervus. NCBI_TaxID=109627;
                                                                                                                                                                                                                                                                                  Cervus elaphus scotticus
                                                                                                                                                                                                                                                                                                      Beta nerve growth
                                                                                                                                                                                                                                                                                                                01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                   PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1;
                                                                                                                                                                                             Suttle J.M.;
                                                                                                                                                                                                    SEQUENCE FROM N.A.
Robertson T.M., Stanton J.L.,
                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                 185
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                                                                                                                                                                                                                                                                                                                                                                                                                 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
           Similarity
                                                                          PS00248; NGF_1;
PS50270; NGF_2;
                                           87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
  Conservative
                                                       87
                                           A.
                                                                                                                                                                                                                                                                                                       factor (Fragment).
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75.0%;
            69.8%;
95.4%;
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 Score 459; DB Pred. No. 1.9e 2; Mismatches
                                                                                                                                                                          EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 492; DB 13;
Pred. No. 1.1e-47;
                                             17EE06E49AF7A0A4 CRC64;
                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                          Clark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4A261F42C5D6FF3F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
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             DB 6;
1.9e-44;
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                         87
                                                                                                                                                                                                             Harris
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                                                D Q91988 PRELIMINARY; PRT; 286 AA.
C Q91988;
C Q91988;
T 01-NOV-1996 (TrEMBLrel. 01, Created)
T 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
T 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
E Neurotrophin-6 precursor.
S Xiphophorus maculatus (Southern platyfish), and
S Xiphophorus helleri.
S Xiphophorus helleri.
C Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom
C Eukaryota; Metazoa; Chordata; Euteleostei; Euteleostei, Neopterygii; Neopterygii; Percomorpha; Atherinomorpha;
C Cyprinodontiformes; Poecillidae; Xiphophorus.
N NCB_TaxID-8083, 8084;
                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS50270; NGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Chung-Kuo I Hsueh Ko Hsueh Yuan Hsueh EMBL; 576884, AAB34114.2; -. HSSP; P01139, 1BET. InterPro; IPH002072; NGF. Pfam; PF00243; NGF; 1.
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01-OCT-2000 (TrEMBLrel. 15,
01-OCT-2000 (TrEMBLrel. 15,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li Y., Huang B., Cai L.;
"Amplification, cloning and sequencing gene in the Chinese population.";
                    SEQUENCE FROM N.A. MEDLINE-95059452;
                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
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                                                                                                                                                                                                                                                PNPVDSGCRGIDSKHWNSYCTTTHTFV
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                                                                                                                                                                                                                                                                               SSSHPIFHRGEFAVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFEQYFFETKCRD
                                                                                                                                                                                                                                                                                                                           . Similarity
82; Conserv
           Koster
                                                                                                                                                                                                                                                                                                                                                                    87 AA; 9729 MW;
                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
           R.,
          PubMed=7969471; ., Winkler C., R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=7720122;
                                                                                                                                                                                                                                                                                                                                   69.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation updat
factor (Fragment).
                                                                                                                                                                                                                                                                                                                         Score 458; DB 4;
Pred. No. 2.4e-44;
1; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                     45E9E27388FDEE27 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Catarrhini; Hominidae,
           Raulf
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          F .
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          Lottspeich
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                                                                                             Euteleostomi;
          F .
                                                                                   Neoteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 growth
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"Expression of brain-derived neurotrophic factor, neurotrophin-3 and RT their receptor messenger RNAs in monkey rhinal cortex.";

REMBL; AF222683; AAF33791.1; -.

DR EMBL; AFP02072; NGF.

DR InterPro; IPR002072; NGF.

DR Pfam; PF00243; NGF; 1.

DR PRINTS; PR00265; NGF; 1.

DR PRODOM; PD002052; NGF; 1.

DR PROSITE; PS00248; NGF_1; 1.

PR PROSITE; PS00248; NGF_1; 1.

PR PROSITE; PS00248; NGF_2: 1
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Best Local s
Matches 69
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EMBL; L36942; AAA61923.1; -
EMBL; L369325; AAA61922.1; -
EMBL; L36326; AAA61921.1; -
HSSP; P01139; IBET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Signal.
SIGNAL
CHAIN
SEQUENCE
                                                                                                                                                                                                 MEDLINE=99270338; PubMed=10340513;
Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Miyashita Y.;
"Quantitative evaluation of neurotrophin and trk mRNA expression visual and limbic areas along the occipito-temporo-hippocampal pain adult macaque monkeys.";
                                                                                                                                                                                                                                                                                                                                                     01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-DEC-2001 (TrEMBLrel. 19, Neurotrophin-3 (Fragment).
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ProDom; PD002052; NGF;
SMART; SM00140; NGF; 1.
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                                                                                                                                                                                                                                                            TISSUE-BLOOD;
                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                               Q9N182
                                                                                                                                                                   SEQUENCE FROM
                                                                                                                                                                                                                                                                                            NCBI_TaxID=9542;
                                                                                                                                                                                                                                                                                                        Cercopithecinae;
                                                                                                                                                                                                                                                                                                                                          Macaca fuscata (Japanese macaque).
                                                                                                                                                                                                                                                                                                                                                                                                     Q9N182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00248; PROSITE; PS50270;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              102
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                                                                                                                                                                                       Comp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRDP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FIRINAACVCVLSRNSWSR 282
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                                                                                                                                                                                         Neurol.
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143
286
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                                                                                                                                                                  N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                         408:378-398(1999).
                                                                                                                                                                                                                                                                                                          Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NGF_1;
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286
31424 MW;
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                        Created)
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Pred. No. 2.9e
L8; Mismatches
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5607DBA66792E12D
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.9e-31;
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RESULT 15
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A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
A Arakawa T., Hara A., Fukunishi Y., Konno H., Kondo S., Yamanaka I.,
A Alzawa M., Nishii K., Kiyosawa H., Kondo S., Yamanaka I.,
A Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
A Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
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A Kuehl R., Catubili F., Suzuki R., Gonita M., Wagner L., Washio T.,
A Schriml L.M., Staubili F., Suzuki R., Dromita M., Wagner L., Washio T.,
A Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Blake J., Boffelli D., Hofmann M., Hume D.A., Kaniya M., Lee N. H.,
A Gustincich S., Hill D., Hofmann M., Hume D.A., Kaniya M., Lee N. H.,
A Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
A Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
A Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storich K.-F.,
A Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
A Nordone P., Kaniya M., Lee N., Washima Y., Kochisuki S.,
A Maynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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Best Local S
                                                                      Matches
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STRAIN-C57BL/6J; TISSUE-EMBRYO;
MEDLINE-21085660; PubMed-11217851;
Chibara K
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9CYL3
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                                                                                                                                              PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 153 AA; 17519 MW;
                                                                                                                                                                                                PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                       MGD; MGI:88145; Bdnf.
Interpro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                             "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
EMBL; AK017559; BAB30805.1; -.
HSSP; P23560; 188M.
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RGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYTKE 100
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59; Conservative
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27803 MW;
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                                                                      Score 324.5; DB 11;
; pred. No. 6.3e-29;
14; Mismatches 34;
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Pred. No. 2.8e-30;
L8; Mismatches '22;
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Search completed: December Job time: 19.7245 secs 2, 2002, 15:12:01

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Minimum
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Maximum Match 100%
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Perfect score:
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2: /cgn2_6/ptodata/1/

3: /cgn2_6/ptodata/1/

4: /cgn2_6/ptodata/1/
5: /cgn2_6/ptodata/1/
6: /cgn2_6/ptodata/1/
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length: 2000000000
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Match
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US-09-675-503-2
US-09-363-573-2
US-08-441-513A-3
US-08-441-513A-3
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US-08-811-662-31
US-09-647-356-1
US-09-647-356-1
US-09-647-356-1
US-08-595-043A-75
US-08-595-043A-75
US-08-944-826A-5
US-08-970-865-1
US-08-970-865-1
US-08-970-865-1
US-08-928-694-5
US-08-955-043A-75
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US-08-955-043A-75
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US-08-955-043A-75
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US-08-753-642-2
US-09-675-922-4
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	DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 	PSSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCR 	; Score 658; DB 4; ; Pred. No. 4.1e-75; 0; Mismatches 0;	NEUROTROPHINS FROINING OTHER PROTION 675,503 55 55 65 67 73 sion 4.0	ALIGNMENTS	US-08-845-541B-3 US-09-066-065A-3 US-08-845-541B-12 US-09-066-065A-14 US-09-066-065A-12 US-09-066-065A-17 US-09-066-065A-17 US-09-066-065A-17 US-09-066-065A-18 US-09-066-065A-18 US-09-066-065A-18 US-09-066-065A-18 US-09-066-065A-18 US-09-066-065A-18 US-08-845-541B-13 US-08-845-541B-13 US-08-845-541B-13 US-08-845-541B-13 US-09-066-065A-13 US-09-066-065A-13
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RESULT 2 US-08-970-865-2 ; Sequence 2, Application US/08970865

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US-08-970-865-2
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                                                                                                                                                                                                                                                         Sequence 2, Application US/09363573
Patent No. 6184360
GENERAL INFORMATION:
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 120 amino acid
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APPLICATION NUMBER: 60/030
FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/047
FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: TOICH18, PhD., Timothy E. REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P1063R:
TELECOMMUNICATION INFORMATION:
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MEDLIM TYPE: 3.5 Inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICATION NUMBER: US,
FILING DATE: 14-No. 600
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NERAL INFORMATION:
APPLICANT: Louis E. Burton, Charles H. Schmelzer, Joanne T.
TITLE OF INVENTION: Purification of NGF

""" OF SEQUENCES: 6
                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                       APPLICANT: Louis E. Burton, Charles H. Schmelzer, Joanne T. TITLE OF INVENTION: Purification of NGF
                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 050/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                             62 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALIMDGKQAAWRFIRIDTACVCVLSRKAVRRA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: Amino Acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 94080
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                                                                                                                                   CITY: South San Francisco
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6005081-1997
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Pred. No. 3.1e-74;
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Patent No. 57288
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                              FILING DATE: 12-May-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UMBER: 08/253
FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                           ZIP: 94080
COMPUTER REALABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Urfer, Roman
APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
TITLE OF INVENTION: PANTROPIC NEUROTROPHIC FACTORS
NUMBER OF SEQUENCES: 7
                                                                                                                                              SOFTWARE: WinPatin (Ge
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 12-May-19
                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Torchia, PhD., Timoth
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/047855
FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: 60/030838
FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 120 amino acids TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                   NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,7
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                                                                                                                                                                                                                                                                                                                                         STATE:
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                                                                                                                                                                                                                                                                                                                                                         T: 460 Point San Bruno Blvd
South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08440049
                                                                                                                                                                                                                                                                                                                                       California
                                                                                                                                                                                                                                                                                                                        USA
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NUMBER:
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6184360-1997
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                                                                                             08/253937
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                 36,700
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P0905C2
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US-08-441-513A-3
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Best Local Similarity
                                                                          Query Match
Best Local :
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                                                       Best Local Similarity Matches 119; Conserv
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                 TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 120 mnino acids
TYPE: Amino Acid
                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/253937
FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: TOICCHIA, PhD., TIMOCHY E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0905C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Urfer, Roman
APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
TITLE OF INVENTION: Pantropic Neurotrophic Factors
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                            TELEPHONE: 650/225-8674
                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/OFFILING DATE: 15-May-1995 CLASSIFICATION: 435
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STREET: 1 DNA Way
CITY: South San Francisco
STATE: California
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99.2%;
                                                                     98.5%;
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Pred. No. 7.4e-74;
                                                   Score 648; DB 2; L
Pred. No. 7.4e-74;
1; Mismatches 0;
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                                                                                     2; Length 120;
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NUMBER OF SEQ ID NOS: 36
SEQ ID NO 31
LENGTH: 120
TYPE: PRT
ORGANISM: Homo sapiens
US-08-581-662-31
RESULT 8
US-09-066-065A-1
Sequence 1, Application US/09066065A
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US-08-581-662-31
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APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treat
FILE REFERENCE: P0981
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Sequence 31, Appite
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6121235
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Best Local Similarity
Matches 119; Conserv
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Patent No. 6333310
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APPLICANT: Urfer, Roman
APPLICANT: Winslow, John
TITLE OF INVENTION: NGF VARIANTS
FILE REFERENCE: GENENT .039A
CURRENT APPLICATION NUMBER: US/08/845,541B
CURRENT FILING DATE: 1999.04-25
NUMBER OF SEQ ID NOS: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/08/581,662 CURRENT FILING DATE: 1995-12-29
                                                                                                                                                                                                                                                                                                     LENGTH: 120
TYPE: PRT
ORGANISM: homo sapien
                                                                                                       61
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99.2%;
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99.2%;
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Best Local S
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APPLICANT: Leonar
               SOFTWARE:
SEQ ID NO 1
                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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APPLICATION NUMBER: 60/044918
PILING DATE: 25-APR-1999
ATTORNEY/AGENT INFORMATION:
NAME: TOICH18, PhD., Timothy
REGISTRATION NUMBER: 36,700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 650/952-9881 INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                  TITLE OF INVENTION: CLOSTRIDIAL TOXIN DERIVATIVES ABLE TO MODIFY PERIPHERAL TITLE OF INVENTION: SENSORY AFFERENT FUNCTIONS FILE REFERENCE: 023223/0104
                                                                                                                                                                                                                     APPLICANT: FOSTER, KEITH ALAN
APPLICANT: DUGGAN, MICHAEL JOHN
APPLICANT: SHONE, CLIFFORD CHARLES
                                               NUMBER OF SEQ ID NOS:
                                                               PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1998-C
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1995-C
                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/447,356
CURRENT FILING DATE: 1999-11-22
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NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: WinPatin (Ger
CURRENT APPLICATION DATA:
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LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WinPatin (Genentech)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 120 amino acids
TYPE: Amino Acid
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les 119; Conservative
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" San Francisco
                             PatentIn Ver.
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                                                                   1995-04-21
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Pred. No: 7.
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; ORGANISM: Murine US-09-447-356-1
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; LENGTH: 120
; TYPE: PRT
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APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
FILE REFERENCE: GENENT.051C1
CURRENT APPLICATION NUMBER: US/09/664,295
CURRENT FILING DATE: 2000-09-18
PRIOR APPLICATION NUMBER: US 08/581,662
PRIOR FILING DATE: 1995-12-29
NUMBER OF SEQ ID NOS: 37
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Best Local S
                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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                                                                                                                                                                                                                      TITLE OF INVENTION: PANTROPIC NEUROTROPHIC FACTORS NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS: ADDRESS: Genentech, Inc.
                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Generitech)
CURRENT APPLICATION DATA:
                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                  APPLICANT: Genentech, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
hes 119; Conserv
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les 119; Conserv
                                                                                                                                                                                           STREET: 460 Point San Bruno
CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                   62
                CLASSIFICATION:
                             APPLICATION NUMBER: FILING DATE:
                                                                                                                                                             COUNTRY:
                                                                                                                                                                             STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 SSSHDIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRD 61
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                                                                                                                                                   94080
                                                                                                                                                                                                                                                                                                            Application PC/TUS9506918
                                                                                                                                                                             California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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99.2%;
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99.2%;
                                            PCT/US95/06918
                                                                                                                     360 Kb floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 648; DB 4;
Pred. No. 7.4e-74;
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US-08-266-080B-4
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Matches 119;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/240,
FILING DATE: 09-MAY-1994
PRIOR APPLICATION DATA: 08/087,
APPLICATION NUMBER: 08/087,
FILING DATE: 06-JULY-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 90
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEPAX: 415/952-9881
                                                                                                                                                                                                                                                                                          SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Tadahiko Kohno
APPLICANT: Duane Bonam
APPLICANT: Mary S: Rosendahl
TITLE OF INVENTION: Producti
TITLE OF INVENTION: Recombin
                                                        APPLICATION NUMBER: 07/59
FILING DATE: 09-OCT-1990
PRIOR APPLICATION DATA:
                                                                                                      APPLICATION NUMBER: (FILING DATE: 04-APRII PRIOR APPLICATION DATA:
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ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 27-JUI
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                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM:
                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
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l9; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                           Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3: Swanson & Bratschun, L.L.C.
8400 E. Prentice Avenue, Suite
                                                                                                                                                                                                                                                                                                                                                                                                          USA
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                             UMBER: 07/547,750
02-JULY-1990
                                                                                                                         UMBER: 07/680,681
04-APRIL-1991
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07/505,441
                                                                                         07/594,126
                                                                                                                                                                                       08/087,912
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Pred. No. 7.4e-74;
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Patent No. 5702906
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                             APPLICATION NUMBER: 07/58
FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TOrchia, Timothy E.
REGISTRATION NUMBER: 36,7
                                                                                                          APPLICATION NUMBER: FILING DATE: 31-JAN PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: (303) 793-3333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 06-APRIL-199
ATTORNEY/AGENT INFORMATION:
NAME: Barry J. Swanson
REGISTRATION NUMBER: 33,
                                                                                                                                                       FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                 SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: GENENTECH, APPLICANT: ROSENTHAL,
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/426419 FILING DATE: 19-APR-1995
                                                                                                                                                                                                                                                                   FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 460 Point San Bruno Blvd CITY: South San Francisco STATE: California
             REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 6666P2C1D2
                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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les 119; Conserv
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                                                                                                                                                                                        APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                 94080
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99.2%;
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ARNON
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                                                                                             07/587707
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                                                                                                                                                                                                                                                                                                                                                                                360 Kb floppy disk
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US-08-424-826A-5
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Best Local :
 Best Loc
Matches
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                               Query Match
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 98
CORRESPONDENCE ADDRESS:
ADDRESS:
                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 07/58
FILING DATE: 25-SEP-1990
ATTORNEY/AGENT INFORMATION:
NAME: TOICHIB, PhD., Time
                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/6
FILING DATE: 31-JAN-1991
PRIOR APPLICATION DATA:
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                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/OFFILING DATE: 19-Apr-1995 CLASSIFICATION: 514
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 241 amino acids TYPE: amino acid
                                                                                                                                                            TELEFAX: 415/932 TELEX: 910/371-7168
                                                                                                                                                                                                                                       NAME: Torchia, PhD., Timothy E. REGISTRATION NUMBER: 36,700 REFERENCE/DOCKET NUMBER: P0666P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 460 Point San Bruno CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 08/2/
FILING DATE: 10-May-1994
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               Local Similarity
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                                                                                                                                                                                                      TELEPHONE:
                                                                                      TOPOLOGY:
                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94080
                                                                                                  : 241 amino acids
Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 California
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 98.5%;
llarity 99.2%;
Conservative
                                                                                    Linear
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Score 648; DB 2;
Pred. No. 1.9e-73;
1; Mismatches 0;
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Pred. No. 1.9e-73;
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US-08-595-043A-75
Search completed: December Job time: 8.36928 secs
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Sequen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (415) 397-8338
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: SG
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: PATENTIA Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
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STREET: 220 MONTGOMERY STREET, SUITE 2200
CITY: SAN FRANCISCO
STATE: CALIFORNIA
                                                                                                                            APPLICATION NUMBER: FILING DATE: 31-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARROLL,
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99.2%;
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Pred. No. 1.9e-73;
1; Mismatches 0;
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GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.

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Database
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perfect score:
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           111111987654321
143210....
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:/cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
:/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
:/cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

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384.5	3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	385.5	385.5	385.5	385.5	385.5	387	455	594	625	639	639	639	639	648	648	648	658	Score
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/11	120	120	120	119	119	119	72	142	121	121	167	163	157	153	242	241	241	121	Length
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Sequence 7, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 6, Appli	Sequence 6, Appl1	Sequence 6, Appli	_	Sequence 52, Appl	Sequence 3, Appli	Sequence 9, Appli	Sequence 8, Appli	Sequence 6, Appli	Sequence 4, Appli	Sequence 2, Appli	Sequence 1, Appli	Sequence 16, Appl	Sequence 5, Appli	Sequence 2, Appli	Description

384.5 58.4 117 10 US-09-872-090-7 384.5 58.4 118 10 US-09-745-032-5 384.5 58.4 118 10 US-09-742-600-5 384.5 58.4 118 10 US-09-742-600-5 380.5 57.8 120 10 US-09-742-600-1 380.5 57.8 120 10 US-09-742-600-1 380.5 57.8 120 10 US-09-872-090-1 380.5 57.8 120 10 US-09-742-600-1 380.5 57.8 120 10 US-09-743-032-10 380.5 50.8 120 10 US-09-742-600-10 334.5 50.8 120 10 US-09-742-600-10 334.5 50.8 120 10 US-09-742-600-9 330.5 50.2 120 10 US-09-742-600-9 326.5 49.3 120 10 US-09-742-600-9 326.5 49.3 120 10 US-09-742-600-8 324.5 49.3 120 10 US-09-742-600-9 326.5 40.7 130 8 US-08-450-842-23 307.5 46.7 130 8 US-08-450-842-2	<b>4</b> 5	44	43	42	41	40	39	38	37	36	35	34	ω G	32	31	30	29	28	27	26	25	24	23	22	21	0
	307.5	307.5	307.5	307.5	308.5	309.5	313	324.5	324.5	324.5	326.5	330.5	330.5	334.5	334.5	371	374	380.5	380.5	380.5	380.5	384.5	384.5	384.5	384.5	004.0
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### ALIGNMENTS

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; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSEQ for WI
; SEQ ID NO 2
; LENGTH: 121
; TYPE: PRT
; ORGANISM: HOMO Sapien
US-10-072-681-2
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US-10-072-681-2
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PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/047855
PRIOR APPLICATION NUMBER: 60/970865
PRIOR APPLICATION NUMBER: 08/970865
PRIOR FILING DATE: 1997-11-14
PRIOR APPLICATION NUMBER: 09/363573
PRIOR FILING DATE: 1999-07-29
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR FILING DATE: 2000-09-29
                                                                                                                                                                   Query Match
Best Local Similarity
Matches 121; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Burton, Louis E.
APPLICANT: Schmeizer, Charles H.
APPLICANT: Beck, Joanne T.
TITLE OF INVENTION: PURIFICATION OF NGF
FILE REFERENCE: GENENT .037C3
CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
61
                      61 DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 120
                                                                                DPNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 120
                                                                                                                                                                 100.0%; Score 658; DB 12; illarity 100.0%; Pred. No. 5.2e-69; Conservative 0; Mismatches 0;
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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 119; Conserv
                                                                                                                                                                                                                                                                                        TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION DATA:
PRIOR APPLICATION NUMBER: 07/648482
APPLICATION STATE: 31-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666P2C1D3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEPHONE: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 A 121
                                                                                                                       STREET: 460 Point San Bruno Blvd CITY: South San Francisco STATE: California
                                                          NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
                                                                                                                                                                                                                                                                TOPOLOGY:
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US20020045576A1
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                                                                                                                                                                                                                                                                amino acid
)GY: linear
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                                                                                                                                                                                      Score 648; DB 8; L
Pred. No. 1.7e-67;
                                                                                                                                                                                                                     Length 241;
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Sequence 16,

Application US/09822263

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PRIOR APPLICATION NUMBER: 60/156,745

PRIOR APPLICATION NUMBER: 60/158,942

PRIOR APPLICATION NUMBER: 60/159,942

PRIOR FILING DATE: 1999-10-06

PRIOR APPLICATION NUMBER: 60/159,248

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/169,344

PRIOR FILING DATE: 1999-12-06

PRIOR FILING DATE: 1999-12-06
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Best Local Similarity
Matches 119; Conserv
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                                              SOFTWARE: FastSEQ SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 09/672,665
PRIOR FILING DATE: 2000-09-28
PRIOR FILING DATE: 2000-09-28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2000-06-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR FILING DATE: 1997-11-14
                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: PURIFICATION OF NGF FILE REFERENCE: GENERT.037C3
                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/030838 PRIOR FILING DATE: 1996-11-15
                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Burton, Louis E.
                                                                                                                             PRIOR APPLICATION NUMBER: 09/675,503
                                                                                                                                            PRIOR APPLICATION NUMBER: 09/363573 PRIOR FILING DATE: 1999-07-29
                                                                                            NUMBER OF SEQ
                                                                                                           PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
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ORGANISM: Homo sapien
                                  LENGTH:
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Burgess, Catherine
Spytek, Kimberly
Tchernev, Velizar T
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                                                                                                                                                                                                                                                                                                                                                                      Schmelzer, Charles H. Beck, Joanne T.
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                                                               ID NOS: 6
LSEQ for Windows Version
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    Mismatches

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Pred. No. 1.7e-67;
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US-09-798-338-4
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; OTHER INFORMATION: Protein Sequence
US-09-798-338-2
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US-09-798-338-2
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Patent No. US20010020086A1
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Best Local :
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SEQ ID NO 4
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                                                                                                                        APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Sakiyama, Shelly E.
APPLICANT: Sakiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS:
FILE REFERENCE: 87662-68879
           CURRENT APPLICATION NUMBER: US/09/798,338
CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/798,338
CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Sakiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
FILE REFERENCE: 87662-68879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn Ver. 2.0
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TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRRA 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                95
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 99.; ses 117; Conservative
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Pred. No. 1.1e-66;
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Pred. No. 1.7e-67;
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                                                  Sequence 8, Application US/09798338
Patent No. US200100220086A1
GENERAL INFORMATION:
APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Sakiyama, Shelly E.
APPLICANT: Sakiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF PROTEINS
FILE REFERENCE: 87662-68879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity Matches 117; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6, Application US/09798338 Patent No. US20010020086A1
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Best Local
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APPLICANT: Schense, Jason C.
APPLICANT: Schense, Jason C.
APPLICANT: Satiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/798,338
CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
                  CURRENT APPLICATION NUMBER: US/09/798,338 CURRENT FILING DATE: 2001-03-02
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PRIOR APPLICATION NUMBER: 09/141,153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Description of Artificial Sequence: Artifical OTHER INFORMATION: Protein Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                              105 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVR 162
                                                                                                                                                                                                                                                                                                                                                                                      62 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALIMDGKQAAWRFIRIDTACVCVLSRKAVR 119
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99.2%;
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99.2%;
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Pred. No. 1.1e-66;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 639; DB 10;
Pred. No. 1.2e-66;
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Joanne

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; SOFTWARE: FastSEQ for WJ
; SEQ ID NO 9
; LENGTH: 121
; TYPE: PRT
; ORGANISM: HOMO SAPIEN
US-09-813-398-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Bruce D. Weintraub
APPLICANT: Mariusz W. Szkudlinski
APPLICANT: Mariusz W. Szkudlinski
APPLICANT: Mariusz W. Szkudlinski
APPLICANT: University of Maryland
TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS
FILE REFERENCE: UOFMO.003C1
CURRENT APPLICATION NUMBER: US/09/813,398
CURRENT FILING DATE: 2001-03-20
PRIOR APPLICATION NUMBER: PCT/US99/05908
PRIOR APPLICATION NUMBER: PCT/US99/19772
PRIOR APPLICATION NUMBER: PCT/US98/19772
PRIOR APPLICATION NUMBER: PCT/US98/19772
PRIOR FILING DATE: 1998-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence:Artificial OTHER INFORMATION: Protein Sequence US-09-798-338-8
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                                                                             RESULT 10
US-10-072-681-3
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Best Local S
Matches 115
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NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Sequence 3, Application US/10072681 Patent No. US/20020137893A1 GENERAL INFORMATION:

APPLICANT: Burton, Louis E.

APPLICANT: Schmelzer, Charles H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 9, Application US/09813398 Patent No. US20020169292A1
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
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nes 115; Conserv
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                                                                                                                                                                                                                                                                        SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 108
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95.0%;
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Pred. No. 1.2e-66;
1; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                         Score 625; DB 9; Pred. No. 3.3e-65;
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                                                                                                                                                                                                                                                                                                                                                                          9; Length 121;
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CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
PRIOR APPLICATION NUMBER: 60/030838
PRIOR FILING DATE: 1996-11-15
PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR FILING DATE: 1997-11-14
PRIOR FILING DATE: 1997-11-14
PRIOR APPLICATION NUMBER: 09/363573
PRIOR FILING DATE: 1999-07-29
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR FILING DATE: 2000-09-29
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US-08-450-842-52
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SEQ ID NO 3
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: GENENTECH, INC
APPLICANT: ROSENTHAL, ARN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 12
TYPE: PRT
                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4:
FILING DATE: 19-APR-1995
                                                                                                                                                                                                                                                           SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                    FILING DATE: 22-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                       STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
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                                  APPLICATION NUMBER: FILING DATE: 31-JAN
                                                                                                                                                                                                      CLASSIFICATION:
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   07/587707
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Pred. No. 1.3e-61;
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ATTORNEY/AGENT INFORMATION:

Torchia, Timothy

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RESULT 13
US-09-745-032-6
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 52
SEQUENCE CHARACTERISTICS:
LENGTH: 142 amino acids
TYPE: amino acid
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Matches
              Sequence 6, Application US/09745032 Patent No. US20010027179A1 GENERAL INFORMATION:
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SEQ ID NO 21
LENGTH: 72
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CURRENT APPLICATION NUMBER: US/09/848,664

CURRENT FILING DATE: 2001-05-03

PRIOR APPLICATION NUMBER: 09/298,084

PRIOR PRICATION NUMBER: 09/298,084

PRIOR FILING DATE: 1999-04-22

NUMBER OF SEQ ID NOS: 31
APPLICANT: Boone,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Sakiyama-Elbert, Shelly E. APPLICANT: Hubbell, Jeffrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEPHONE: 415/225-8674
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                                                                                                                                     61 PNPVDSGCRGID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50 FRQYFFETKCRDPNPVD------SGCRGIDSKHWNSYCTTTHTFVKALTMDGK-QAAWR 101
                                                                                                                                                                      62 PNPVDSGCRGID 73
                                                                                                                                                                                                                                                                                           Local
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Thomas C.
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98.6%;
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                                                                                                                                                                                                                                                                        Score 387; DB 10;
Pred. No. 5.1e-38;
1; Mismatches 0;
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RESULT 15 US-09-872-090-6

Application US/09872090

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APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N.
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/742,600
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
SOFTMARE: PatentIn Ver: 2.1
SEQ ID NO 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 6, Application US Patent No. US20020010135A1 GENERAL INFORMATION:
                                                                                                                                                                      Query Match
Best Local Similarity
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Best Local Similarity 60.7%;
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APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
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                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Human
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67
                                  69 CRGIDSKHWNSYCTTTHTEVKALTMD-GKQAAWRFIRIDTACVCVLSRKAVR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67 CRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGR 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69 CRGIDSKHWNSYCTTTHTEVKALTMD-GKQAAWREIRIDTACVCVLSRKAVR 119
                                                                                              9 HRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRDPNPVDSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 HRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEAAPVDNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 HRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFRQYFFETKCRDPNPVDSG
CRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGR 118
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                                                                                                                                                      Conservative
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                                                                                                                                                                      58.6%;
                                                                                                                                                    19;
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                                                                                                                                                                      Score 385.5; DB 10; Pred. No. 1.4e-37;
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Pred. No. 1.4e-37;
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                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 10;
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APPLICANT: BOONE, Thomas C.
APPLICANT: Cheung, Ellen Ngoi Yin
APPLICANT: Cheung, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: Analogs of NT-3 (As Amended)
FILE REFERENCE: A-411B
CURRENT APPLICATION NUMBER: US/09/872,090
CURRENT APPLICATION NUMBER: 09/255,953
PRIOR APPLICATION NUMBER: 09/255,953
PRIOR APPLICATION NUMBER: 08/684,353
PRIOR APPLICATION NUMBER: 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 6
LENGTH: 119
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Analog of
OTHER INFORMATION: human NT-3.
US-09-872-090-6
Search completed: December 2, 2002, 15:14:34 Job time: 5.25557 secs
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Result
No.
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Maximum
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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Match
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Gapop 10.0 , Gapext 0.5
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1: /SIDS2/gcgdata/
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SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1981 DAT:

SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1982 DAT:

SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1983 DAT:

SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1985 DAT:

SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1985 DAT:

SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1986 DAT:

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                    AAW48887

AAP40036

AAP40039

AAR45240

AAR21868

AAR21873

AAM50845

AAR21862

AAR21862
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                Mouse nerve growth
Sequence encoded b
Sequence encoded b
Cloned mouse pre-
Chimeric neurotrop
Chimeric neurotrop
Mouse nerve growth
Chimeric neurotrop
NGF, mouse. Mus m
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Chimeric neurotrop
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88.7	88.7	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	89.4	9.	9.	.0	۳.	Ν.	ω	ω.	ω	ω	٠.	95.3	5	6
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AAP40040	AAP91034	AAW69725	AAR45241	AAP40038	ABB04994	AAE18904	AAB66929	AAB67865	AAY07303	AAW48886	AAW26237	AAR66688	AAR77419 ~	AAR13886	AAR13858	AAR11474	AAR13063	AAR21851	AAB35944	AAG64994	AAB29141	AAW81117	AAR37799	AAP90133	AAR21863	AAR21869	AAR21867	AAR21874	AAR21865	AAR21872	AAR54084	AAR21871	AAR21866	AAR21870
Sequence encoded b	Human nerve growth	Human beta-nerve g	Human pre-pro nerv	Sequence encoded b	nerve	beta n	Human NGF. Homo s	ro.	Human nerve growth	Human prepro-nerve	Human preproNGF.	Human nerve growth	Human nerve growth	NGF with pro-regio	nerve	Human nerve growth	Human NGF SmaI-Apa	Chimeric neurotrop	NGF-beta amino aci		N-terminal of neut	growth	NGF.	н						Chimeric neurotrop	Nerve growth facto	Chimeric neurotrop	Chimeric neurotrop	Chimeric neurotrop

# ALIGNMENTS

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RESULT 1
AAW48887
Key
Region
(GETH ) GENENTECH INC
               29-MAY-1997;
15-NOV-1996;
                                     14-NOV-1997;
                                                     22-MAY-1998
                                                                                                  Region
                                                                                                                                               Mus sp.
                                                                                                                                                              Neurotrophin; nerve growth factor; NGF; hydrophobic interaction chromatography.
                                                                                                                                                                                    Mouse nerve growth factor.
                                                                                                                                                                                                     12-OCT-1998
                                                                                                                                                                                                                   AAW48887; .
                                                                                                                                                                                                                                    AAW48887 standard; Protein; 120 AA.
                                                                    WO9821234-A2
                                                                                                                                                                                                     (first entry)
              97US-0047855.
96US-0030838.
                                      97WO-US21068
                                                                                                                        Location/Qualifiers 58..68
                                                                                   58.68 "conserved Cys-containing region involved /note= "conserved Cys-containing region involved 108.110"
                                                                                                                                                                      mouse; purification;
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RESULT 2
AAP40036
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other proteins using a hydrophobic interaction chromatography resin (HICR); and optionally (2) separating the neurotrophin from a chemical variant by high performance cation exchange chromatography (HECEC). The processes can also be used for purification of e.g. human NGF (see AAM48886), brain-derived neurotrophic factor (see AAM48889), neurotrophin-4/5 (see AAM4889)) and neurotrophin-3 (see AAM48889). The processes allow separation of neurotrophins from various undesirable misprocessed, misfolded, size, glycosylated or charge forms. They allow selective separation from variants and other molecules, and from other polypeptides with high pi. The processes are applicable to starting materials from various
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This polypeptide comprises mouse nerve growth factor (NGP) mature polypeptide. Methods are provided for large-scale purification of neurotrophins, including mature NGF, suitable for clinical use. A claimed method comprises: (1) separating the neurotrophin from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolation of neurotrophin(s) from, e.g. mis-folded or glycosylated variant(s) - using hydrophobic interaction chromatography, optionally in combination with high performance cation exchange
                                                                                                                                                                                                                           Sequence encoded by the and flanking regions on
                      Gray AM,
                                                                                                 02-MAR-1984;
                                                                                                                                                  EP121338-A.
                                                                                                                                                                                                                                                                                                                    AAP40036 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                         10-OCT-1984
                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                   Nerve damage;
                                                                                                                                                                                                                                                                   25-JAN-1992
                                              (GETH ) GENENTECH INC
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                       ullrich A;
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ilarity 100.0%;
Conservative (
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                                                                                                                                                                                                                                                                  (first entry)
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Pred. No. le-66;
                                                                                                                                                                                                                            beta-nerve growth lambda h-beta-N8.
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                                                                                                                                                                                                                                           factor (NGF)
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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The inventors claim human beta-nerve growth factor (NGF) free from other proteins of human origin. Also claimed are the DNA sequence encoding human beta-NGF operably linked with a DNA sequence capable of effecting its expression in a recombinant host cell; a replicable expression vector contg. the DNA; and host cells transformed with the vector. The plasmid claimed is plasmid ph-beta-NGF trp 1. Using the plasmid, larger amounts of pure beta-NGF are obtainable than by
                                                                                                                                                                                                                                                                                                      Key
Peptide
The inventors claim human beta-nerve growth factor (NGF) other proteins of human origin. Also claimed are the DNA
                                                                                                                                  Gray
                                                                                                                                                                                                                                                                                                                                                                 Nerve damage;
                                                                                                                                                                                                                                                                                                                                                                                        Sequence encoded (NGF) gene.
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                                                           Human beta-nerve growth factor free from other proteins by recombinant DNA techniques for treating nerve damage
                                                                                                                                                                                  03-MAR-1983;
                                                                                                                                                                                                          02-MAR-1984;
                                                                                                                                                                                                                                                       EP121338-A.
                                                                                                                                                                                                                                                                               Protein
                                                                                                                                                                                                                                                                                                                                           Homo sapiens
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                                  Example; Fig 6; 42pp; English.
                                                                                                          WPI; 1984-251909/41
                                                                                                                                                       (GETH ) GENENTECH INC
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120; Conserv
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188..307
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                                                                                                                                                                                                                                                                                                                                                                                                     by human prepro-beta-nerve
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sequence

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RESULT 4
AAR45240
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              encoding human beta-NGF operably linked with a DNA sequence capable of effecting its expression in a recombinant host cell; a replicable expression vector contg. the DNA; and host cells transformed with the vector. The plasmid claimed is plasmid ph-beta-NGF trp 1. Using the plasmid, larger amounts of pure beta-NGF are obtainable than by
                                                                                                                                                           Baecker
Ward C;
                                                                               Prodn. of active mature human beta-nerve growth factor in insercells - using baculovirus expression system, and potential use recombinant hNGF in treatment of Alzheimer's disease
                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                              Cloned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR45240 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                             The sequence is that of mouse pre-pro nerve growth factor which was used in a method of producing biologically acti-
                                                                                                                                                                                                              22-NOV-1988;
20-JUL-1989;
                                                                                                                                                                                                                                                                   21-DEC-1993
                                                                                                                                                                                                                                                                                         US5272063-A.
                                                                                                                                                                                                                                                                                                                                                      Key
                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                               expression; NGF;
                                                                                                                                                                                                                                                                                                                                                                                                           Mature human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-JUN-1994
Sequence
                    mature human
                                                                                                                            N-PSDB;
                                                                                                                                                                                         (SYNT)
                                                                                                                                                                                                                                              20-JUN-1989;
                                                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                           Peptide
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                                                                                                                            1993-413401/51.
DB; AAQ54282.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120;
                                                                                                                                                                                                                                                                                                                                                                                                                              mouse
                                                                                                                                                                     PΑ,
                                                                                                                                                                                           SYNTEX
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307
                                                           Fig 1; 23pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                   beta-nerve
                                                                                                                                                                    Barnett JW,
                                                                                                                                                                                                                                                                                                                                                                                                                             pre-pro nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                beta-nerve growth factor; mouse; pre-pro portion;
SF; hNGF; treatment; Alzheimer's Disease; murine.
ξ
                                                                                                                                                                                         USA INC
                                                                                                                                                                                                               88US-0274878
89US-0383118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ξ
                                                                                                                                                                                                                                              89US-0383118
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                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                "signal peptide"
                                                                                                                                                                                                                                                                                                           "mature peptide"
                   growth factor
                                                            English.
                                                                                                                                                                    Bursztyn-Pettegrew H,
                                                                                                                                                                                                                                                                                                                                                                                                                              growth factor
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Pred. No.
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                           The sequence is that of a chimeric neurotrophic factor (NF) S6 which comprises the mouse neurotrophic growth factor (NGF) residues 1-50, human brain derived growth factor (NBNDF) residues 51-58 and mouse NGF residues 59-120. It may provide the activity of 2 NFs in a single mol. Co residues 59-120. It may provide the activity of 2 NFs in a single mol. Co residues 59-120. It may provide the activity of 2 NFs in a single mol. Co response discovered to a superagonist of an endogenous NF thereby enabling an confidence of the second of the second in the confidence of the second in the complex treatment of second of sector responsive to NF. The design of confidence widespread activity of parent mols. It may be used in the companion of the second of the se
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neurotrophic growth factor; Alzheimer's disease; ageing; peripheral neuropathies; Parkinson's disease; Huntington's amyotrophic lateral sclerosis; nervous system disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 29; Fig 10; 114pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-AUG-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric neurotrophic factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            metabolic diseases, nutritional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          conditions caused by trauma, surgery,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New chimeric neurotrophic factors - useful in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1992-080074/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shooter EM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-AUG-1990;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (REGE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGENERON PHARM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             brain derived neurotrophic factor; NGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g);
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51..58
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59..12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "human BDNF residues 51-58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Squinto SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            deficiency,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             residues 1-50"
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thes 0;
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ia, infection
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RESULT 6
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human BDNF; brain derived neurotrophic factor; NGF; neurotrophic growth factor; Alzheimer's disease; ageing; peripheral neuropathles; Parkinson's disease; Huntington's chorea; amyotrophic lateral sclerosis; nervous system disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      deficiency, malignancy or toxic agents. Also to treat e.g. Alzheimer's disease, ageing, peripheral neuropathies, Parkinson's disease, Huntington's chorea or amyotrophic lateral sclerosis. S6 or antibodies to it can also be used in the diagnosis and study of nervous system disorders. See also AAR21851-R21874 and AAQ22080-Q22131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR21873;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
comprises the mouse neurotrophic growth factor (NGF) residues 1-101, human brain derived growth factor (hBNDF) residues 103-111 and mouse NGF residues 111-120. It may provide the activity of 2 NFs in a single mol. or may serve as a superragonist of an endogenous NF thereby enabling an increased biological response at lower doses. It may also be useful in
                                                                                                               New chimeric neurotrophic factors - useful in treating nervous conditions caused by trauma, surgery, ischaemia, infection, metabolic diseases, nutritional deficiency, etc.
                                                                                                                                                                                                                                                                              07-AUG-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR21873
                                                              The sequence is that of a chimeric neurotrophic factor (NF) S11 which
                                                                                       Claim
                                                                                                                                                                                                                                                       08-AUG-1990;
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                                                                                                                                                                                                                                                                                                                                                                   Peptide
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                                                                                                                                                                                                                             (REGE-) REGENERON PHARM INC
                                                                                                                                                                                        Yancopoulous
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SNPVESGCRGIDSKHWNSYCTTTHTEVKALITDEKQAAWREIRIDTACVCVLSRKATRRG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
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                                                                                                                                                               1992-080074/10
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119; Conser
                                                                                                                                                                                                      EX,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neurotrophic
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102..110
'~~te= "human P
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111..120
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99.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                        "mouse NGF
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                                                                                                                                                                                                                                                                                                                                                        "mouse NGF
                                                                                       English.
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Pred. No. 2.3e-66;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S11.
                                                                                                                                                                                                                                                                                                                                                                                BDNF
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                                                                                                                                                                                                                                                                                                                                                        residues 111-120"
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                                                                                                                                                                                                                                                                                                                                                                               residues
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                                                                                                                                                                                                      Furth
                                                                                                                                                                                                                                                                                                                                                                                103-111"
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                                                                                                                                                                                                        RM;
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RESULT 7
AAM50845
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밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC chimeric Nfs, such as S11, which retain specific biological activity CC but which are directed to a subset of factor-responsive cells may CC enable treatment of neurological disorders but avoid the complications CC enable treatment of neurological disorders but avoid the complications CC for more widespread activity of parent mols. It may be used in the CC tumours of nervous system origin. It may also be used to treat patients CC whose nervous system origin. It may also be used to treat patients CC whose nervous system has been damaged by trauma, surgery, ischemia, CC infection (e.g. polio or AIDS), metabolic disease, nutritional CC disease, ageing, peripheral neuropathies, Parkinson's disease, Chorea or amyotrophic lateral sclerosis. S11 or antibodies Ct oit can also be used in the diagnosis and study of nervous system CC disorders. See also AAR21851-R21874 and AAQ22080-Q22131.
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                                                                                                                                                                              Disulfide-bond
Disulfide-bond
Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                     Huntington's disease; Parkinson's disease; Alzheimer's disease; amyotrophic lateral sclerosis; neurodegenerative disease; cance neuroprofestive.
                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAM50845
                                                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                    cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                         Mouse nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAM50845;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                              neuroprotective; nootropic;
            05-JUL-2000; 2000US-215778P
                                  05-JUL-2001;
                                                                                                                    Misc-difference
                                                                                                                                            Modified-site
                                                                                                                                                                                                                             Protein
                                                                                                                                                                                                                                                    Peptide
                                                         10-JAN-2002
                                                                                   WO200203071-A2
                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           y Match
. Local Similarity
:hes 119; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                         growth
                                                                                                                                                                                                                                                                                                                                    therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                   2001WO-US21472
                                                                                                                    /note= "N-glycosylated"
233..240
                                                                                                                                                                                           179..
                                                                                                                                                                                                                                                    /label-
19..121
                                                                                                                                                                                                                                                                           Location/Qualifiers 1..18
                                                                                                                                             /note= "N-glycosylated" 114
                                                                                                                                                                                189..231
                                                                                                          /note=
                                                                                                                                                                                                                  /label=
                                                                                                                                                                                                                                         /label=
                                                                                                                                                                                                                                                                                                                                                                                                          factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.5%;
99.2%;
                                                                                                                                                                                                                                240
                                                                                                          "conflict, replaced
                                                                                                                                                                                                                    Mature_protein
                                                                                                                                                                                                                                         Propeptide
                                                                                                                                                                                                                                                               Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                  anticonvulsant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 643; DB 13;
Pred. No. 2.3e-66;
l; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                          by CSAGRLQEEA"
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RESULT 8
AAR21862
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Best Loca
Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Screening for a neurotrophic factor mimetic, useful for treating, e.g., cancer and Alzheimer's, comprises combining a candidate mimetic with a fragment of a tyrosine kinase protein \,
           07-AUG-1991;
                                                                                          Peptide
                                                                                                                                                                                     peripheral neuropathies; Parkinson's disease; Huntington amyotrophic lateral sclerosis; nervous system disorders.
                                                                                                                                                                                               neurotrophic
peripheral ne
                                                                                                                                                                                                       Human BDNF; brain derived neurotrophic factor; NGF; neurotrophic growth factor; Alzheimer's disease; ageing;
                                                                                                                                                                                                                                       Chimeric neurotrophic factor NM1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                                                                                                                                            10-JUN-1992
                                                                                                                                                                                                                                                                                AAR21862;
                                                                                                                                                                                                                                                                                                     AAR21862 standard; Protein; 132
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                                20-FEB-1992
                                                   WO9202620-A
                                                                                                              Peptide
                                                                                                                                   Peptide
                                                                                                                                              Кeу
                                                                                                                                                                  HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alzheimer's disease and amyotrophic lateral sclerosis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                    SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR 120
                                                                                                                                                                 sapiens.
                                                                                                                                                                                                                                                                                                                                                                                            SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                           (first entry)
           91WO-US05610
                                                                                            123..132
                                                                                                                       /note-
                                                                                                                                             Location/Qualifiers
                                                                                                     'note= "mouse NGF residues 1-118"
                                                                                                                                                                                                                                                                                                                                                                                                                                             98.0%;
                                                                                                                       "mouse NGF preprosequence"
                                                                      amino acid antigenic peptide fragment human myc protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 640; DB 23; Pred. No. 1.3e-65; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                              Huntington's chorea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 240,
                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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AAR29493
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                                                                                                                                                                                                                                                                                                                                                               Matches
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                                                                                         Neurotrophin;
brain-derived
                                                                                                                       NGF, mouse.
                                                                                                                                                                AAR29493;
                                                                                                                                                                                                                                                                                                                                                               Sequence
         20-MAY-1992;
                              26-NOV-1992
                                                                      Mus musculus
                                                                                                                                            22-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                  AAQ22080-Q22131.
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                                                                                                                                                                                                                                                                                                                       119;
                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                               132
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          92WO-US04266
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avoid the complications of more widespread activity of parent mols. It may be used in the treatment to eliminate diseased cells, e.g. virus infected cells or tumours of nervous system origin. It may also be used to treat patients whose nervous system has been damaged by trauma, surgery, ischemia, infection (e.g. pollo or AIDS), metabolic disease, nutritional deficiency, malignancy or toxic agents. Also to treat e.g. Alzheimer's disease, ageing, peripheral neuropathies, parkinson's disease, Huntington's chorea or amyotrophic lateral sclerosis. NMI or antibodies to it can also be used in the diagnosis and study of nervous system disorders. See also AAR21851-R21874 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence is that of a chimeric neurotrophic factor (NF) NM1 which comprises the preprosequence of mouse neurotrophic growth factor (NGF) residues 1-118 of mouse NGF and a 10 amino acid antigenic peptide fragment of human myc protein. It may provide the activity of 2 NFs in a single mol. or may serve as a superagonist of an endogenous NF thereby enabling an increased biological response at lower doses. It may also be useful in targeting an active cpd. to cells responsive to NF. The design of chimeric Nfs, such as NM1, which retain specific biological activity but which are directed to a subset of factor responsive cells may enable treatment of neurological disorders but
                                                                                                                                                                                                                                                                                   AAR29493 standard; Protein; 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 46; Fig 5; 114pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                     (first entry)
NT; nerve growth fac
neurotrophic factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97.9%;
99.2%;
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                             factor;
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                                NGF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 132;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-MAY-1991;
12-JUL-1991;
23-JUL-1991;
28-AUG-1991;
20-SEP-1991;
14-NOV-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A comparison of the mature NT-4 protein (Xenopus) to the mature NGF, BDNF, and NT-3 proteins from mouse revealed 51%, 60% and 50 amino acid identity respectively. See sequences AAR29491 and AAR29493-95.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Use of neurotrophin-4 for promoting growth and survival cells - useful in treating neurological, fertility and immunological disorders and in diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1992-415468/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (REGE-) REGENERON PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human BDNF; brain derived neurotrophic factor; NGF; neurotrophic growth factor; Alzheimer's disease; agperipheral neuropathles; Parkinson's disease; Hunti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                     neurotrophic growth ractor; Alzheimer's disease; ageing; peripheral neuropathies; Parkinson's disease; Huntington's chorea; amyotrophic lateral sclerosis; nervous system disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimeric neurotrophic factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-JUN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR21864;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR21864 standard;
                                              08-AUG-1990;
                                                                                                                                                                               WO9202620-A
                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
  (REGE-)
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  REGENERON PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 105-106 + Fig 4B; 180pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ibanez Moliner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
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91US-0729253.
91US-0734422.
91US-0751356.
91US-0762674.
91US-0791924.
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                                              90US-0564929
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                                                                                                                                                                                                                                              /note=
23..120
                                                                                                                                                                                                                                                                                          /note=
10..22
                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97.2%;
                                                                                                                                                                                                                                                                     "human BDNF residues 8-20"
                                                                                                                                                                                                                                                                                                               "mouse
                                                                                                                                                                                                                           "mouse NGF residues 23-120"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
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Pred. No. 1.9e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S2
                                                                                                                                                                                                                                                                                                                 NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Persson HB,
                                                                                                                                                                                                                                                                                                               residues 1-9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 118;
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Peptide Peptide

/note= '81..120 69..80

"human "mouse

BDNF

residues 69-80"

"mouse NGF residues 81-120"

/note-

NGF residues 1-68"

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comprises the mouse neurotrophic growth factor (NF) residues 1.9,

CC human brain derived growth factor (hBNDF) residues 8.20 and mouse NGF

CC residues 23-120. It may provide the activity of 2 NFs in a single mol.

CC or may serve as a superagonist of an endogenous NF thereby enabling an

CC increased biological response at lower doses. It may also be useful in

CC chimeric NFs, such as S2, which retain specific biological activity

CC but which are directed to a subset of factor-responsive cells may

CC enable treatment of neurological disorders but avoid the complications

CC enable treatment of neurological disorders but avoid the complications

CC of more widespread activity of parent mols. It may be used in the

CC treatment to eliminate diseased cells, e.g. virus infected cells or

CC tumours of nervous system origin. It may also be used to treat patients

CC deficiency, malignancy or toxic agents, Also to treat e.g. Alzheimer's

CC disease, ageing, peripheral neuropathies, Parkinson's disease,

CC disease, ageing, schorea or amyotrophic lateral sclerosis. S2 or antibodies

CC to it can also be used in the diagnosis and study of nervous system

CC disorders. See also AAR21851-R21874 and AAQ22080-Q22131.
                                                                                                                                                                                                                                                                                                                                                        RESULT 11
AAR21870
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Best Loc
Matches
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                                                                                       Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1992-080074/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yancopoulous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shooter
                                                                                                                                                                        Human BDNF; brain derived neurotrophic factor; NGF; neurotrophic growth factor; Alzheimer's disease; ageing; peripheral neuropathies; Parkinson's disease; Huntington's amyotrophic lateral sclerosis; nervous system disorders.
                                                                                                                                                                                                                                                Chimeric neurotrophic factor
                                                                                                                                                                                                                                                                                                                                           AAR21870 standard; Protein; 120
                                                                                                                                        Homo sapiens
                                                                                                                                                                    amyotrophic
                                                                                                                                                                                                                                                                             10-JUN-1992
                                                                                                                                                                                                                                                                                                              AAR21870;
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                                                                                                                                                                                                                                                                                                                                                                                                                       SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                                                                                                                                                                                                                                                                                                                                                                                                      SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               al Similarity
117; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120 AA;
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GD;
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                                                                                                                                                                                                                                                                               (first entry)
                                                                                                         Location/Qualifiers
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97.58;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 633; DB 13;
Pred. No. 3.3e-65;
1; Mismatches 2;
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                                                                                                                                                                                            chorea;
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RESULT 12
AAR21866
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cc human brain derived growth factor (hBNDF) residues 69-80 and mouse NGF CC residues 81-120. It may provide the activity of 2 NFs in a single mol. CC or may serve as a superagonist of an endogenous NF thereby enabling an CC increased biological response at lower doses. It may also be useful in C targeting an active cpd. to cells responsive to NF. The design of CC chimeric Nfs, such as S8, which retain specific biological activity but which are directed to a subset of factor-responsive cells may CC enable treatment of neurological disorders but avoid the complications of more widespread activity of parent mols. It may be used in the treatment to eliminate diseased cells, e.g. virus infected cells or tumours of nervous system origin. It may also be used to treat patients whose nervous system has been damaged by trauma, surgery, ischemia, CC whose nervous system has been damaged by trauma, surgery, ischemia, CC disease, ageing, peripheral neuropathies, Parkinson's disease, ageing, peripheral neuropathies, Parkinson's disease, CC Huntington's chores or amyotrophic lateral sectorosis. S8 or antibodies to it can also be used in the diagnosis and study of nervous system or toxic disease, ageing, peripheral neuropathies, Parkinson's disease, ageing, peripheral neuropathies, pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                    neurotrophic growth factor; Alzheimer's disease; ageing; peripheral neuropathies; Parkinson's disease; Huntington's amyotrophic lateral sclerosis; nervous system disorders.
                                                                                                                                                          Chimeric neurotrophic factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence is that of a chimeric neurotrophic factor (NF) S8 whic comprises the mouse neurotrophic growth factor (NGF) residues 1-68, human brain derived growth factor (hBNDF) residues 69-80 and mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New chimeric neurotrophic factors - useful in treating nero conditions caused by trauma, surgery, ischaemia, infection, metabolic diseases, nutritional deficiency, etc.
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                                                                                                                                                                                                                                                      AAR21866;
                                                                                                                                                                                                                                                                                                 AAR21866 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1992-080074/10
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                                                                                                                                                                                                                                                                                                                                                                                                                61 SNPVESGCRGIDKRHWNSQCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA
                                                                                                                                                                                                                                                                                                                                                                                                                                        SNPVESGCRGIDSKHWNSYCTTTHTFVKALTIDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSTHPVFHMGEFSVCDSVSVMVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA
                                                                                    BDNF; brain derived neurotrophic factor; NGF; trophic growth factor; Alzheimer's disease; ag
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                                                                                                                                                                                                                                                                                                 Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96.6%;
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                                                                                                                                                                                                                                                                                               120
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                                                                                                                                                          S4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13;
6.6e-65;
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RESULT 13
AAR21871
ID AAR21
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AC AAR21
XX
DT 10-JU
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                                                                                                                                                                                                                                                                                                                                                         CC comprises the mouse neurotrophic growth factor (NGF) residues 1-33.

CC human brain derived growth factor (NBF) residues 34-42 and mouse NGF

CC residues 43-120. It may provide the activity of 2 NFs in a single mol.

CC or may serve as a superagonist of an endogenous NF. thereby enabling an

CC increased biological response at lower doses. It may also be useful in

CC targeting an active cpd. to cells responsive to NF. The design of

CC chimeric Nfs, such as S4, which retain specific biological activity

CC but which are directed to a subset of factor-responsive cells may

CC enable treatment of neurological disorders but avoid the complications

CC tumours of nervous system origin. It may also be used in the

CC tumours of nervous system origin. It may also be used to treat patients

CC whose nervous system has been damaged by trauma, surgery, ischemia,

CC infection (e.g. polio or AIDS), metabolic disease, nutritional

CC disease, ageing, peripheral neuropathles, Parkinson's disease,

CC disease, ageing, peripheral neuropathles, Parkinson's disease,

CC turnington's chorea or amyotrophic lateral sclerosis. S4 or antibodies

CC disorders. See also AAR21851-R21874 and AAQ22080-Q22131.
                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New chimeric neurotrophic factors - useful in treating nerv conditions caused by trauma, surgery, ischaemia, infection, metabolic diseases, nutritional deficiency, etc.
                                                             AAR21871
                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequence is that of a chimeric neurotrophic factor (NF) S4 which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 27; Fig 10; 114pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-AUG-1990;
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Peptide
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                                                                                                                                                                                                                                                                                     Local
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                                                                                                                                                                                                                       SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA
                                                                                                                                          SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                                                                                                                                       SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                                                                                                                                                                        SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGGTVTVLEKVNINNSVFRQYFFETKCRA
                                                                                                                                                                                                                                                                        116;
                                                                                                                                                                                                                                                                                   Similarity
                                                               standard;
                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                  AΑ;
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34..42
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43 120
                                                               Protein;
                                                                                                                                                                                                                                                                                   95.6%;
96.7%;
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                                                               120
                                                                                                                                                                                                                                                                                 Score 624; DB 13;
Pred. No. 3.6e-64;
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                                                                                                                                                                                                                                                                                                  Length 120;
                                                                                                                                                                                                                                                                      Indels
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10-JUN-1992

(first entry)

AAR21871;

Chimeric neurotrophic factor

s9

BDNF;

brain

neurotrophic factor; NGF;

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                                                                                                                                                                                                            CC comprises the mouse neurotrophic growth factor (NGF) residues 1-80, CC human brain derived growth factor (hNDF) residues 81-91 and mouse NGF cresidues 92-120. It may provide the activity of 2 NFS in a single mol. CC or may serve as a superagonist of an endogenous NF thereby enabling an increased biological response at lower doses. It may also be useful in CC thareful neurological response at lower doses. It may also be useful in CC thareful neurological response to NF. The design of CC chimeric Nfs, such as S9, which retain specific biological activity CC but which are directed to a subset of factor-responsive cells may CC enable treatment of neurological disorders but avoid the complications of more widespread activity of parent mols. It may be used in the CC treatment to eliminate diseased cells, e.g. virus infected cells or CC tumours of nervous system origin. It may also be used to treat patients whose nervous system has been damaged by trauma, surgery, ischemia, CC diffiction (e.g. polio or AIDS), metabolic disease, nutritional CC disease, ageing, peripheral neuropathies, Parkinson's disease. CC to it can also be used in the diagnosis and study of nervous system CC disorders. See also AAR21851-R21874 and AAQ22080-Q22131.
                                                                                                                     Query Match
Best Local S
Matches 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New chimeric neurotrophic factors - useful in treating nervous conditions caused by trauma, surgery, ischaemia, infection, metabolic diseases, nutritional deficiency, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neurotrophic growth factor; Alzheimer's disease; ageing; peripheral neuropathies; Parkinson's disease; Huntington's amyotrophic lateral sclerosis; nervous system disorders.
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                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim
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61
                             62
                                                                                          N
SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA
                              SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRRG
                                                           SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA
                                                                                                                                       Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       s caused by trauma, surgery, ischa diseases, nutritional deficiency,
                                                                                                                                                                                    120
                                                                                                                       Conservative
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GD;
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                                                                                                                                     95.3%;
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                                                                                                                        ω
                                                                                                                                     Score 622; DB 13;
Pred. No. 6.1e-64;
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                                                                                                                        Mismatches
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                                                                                                                                                    Length 120;
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RESULT 14
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XX Nerve
XX Nerve
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XX WPI;
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AAR21872
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New chimeric neurotrophic factors and DNA - used to develop prods. for use in the treatment and diagnosis of neurological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Parkinson
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nerve growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neurotrophins are used to treat e.g. Alzheimer disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1994-200202/24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-NOV-1994
                                                                   10-JUN-1992
                                                                                                               AAR21872
                                                                                                                                                      AAR21872 standard;
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                                                                                                                                                                                                                                                                   SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA 61
                                                                                                                                                                                                                                                                                                                                                             al Similarity
113; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B; TrC; receptor; neurological disorder;
disease; Alzheimer disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 48-49; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                (first entry)
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                                                                                                                                                          Protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94.6%;
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                       factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 618; DB
Pred. No. 1.8e
4; Mismatches
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                       S10
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.8e-63;
les 3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                 60
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BDNF; brain derived neurotrophic factor; NGF;

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Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                        of more widespread activity of parent mols. It may be used in the treatment to eliminate diseased cells, e.g. virus infected cells or tumours of nervous system origin. It may also be used to treat patients whose nervous system has been damaged by trauma, surgery, ischemia, infection (e.g. polio or AIDS), metabolic disease, nutritional deficiency, malignancy or toxic agents. Also to treat e.g. Alzheimer's disease, ageing, peripheral neuropathies, Parkinson's disease, Huntington's chorea or amyotrophic lateral sclerosis. S10 or antibodies to it can also be used in the diagnosis and study of nervous system disorders. See also AAR21851-R21874 and AAQ22080-Q22131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New chimeric neurotrophic factors - useful in treating nervous conditions caused by trauma, surgery, ischaemia, infection, metabolic diseases, nutritional deficiency, etc.
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                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 33; Fig 10; 114pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-AUG-1991;
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### ALIGNMENTS

nic sensory ganglia in vivo and in vitro and to increase cellular neurotubule levels C;Genetics:	ophin-4 pre lerived neur
C;Comment: The active molecule is a dimer of identical chains associated by noncovale C;Comment: Nerve growth factor is found in submaxillary gland in large quantities and	erived neur erived neur
A;Cross-references: GB:M14805; NID:g200053; PIDN:AAA39821.1; PID:g200054	
A; MOLECULE Type: mRNA A; MOLECULE Type: mRNA A; Residues: 1-307 < RE3>	erived neur erived neur
A;Status: preliminary; translated from GB/EMBL/DDBJ	
A. Accession: 152891	lerived neur
A;Title: Sequence homology of human and mouse beta-NCF subunit genes.	mpus-derive
Cold Spring Harb. Symp. Quant: Biol. 48, 435-442, 1983	ophin-3 pre
R; Ulrich, A.; Gray, A.; Berman, C.H.; Coussens, L.; Dull, T.J.	ophin-3 pre
A:RESIQUES: 1-30/ KRESA	ophin-3 pre
A; Molecule type: DNA	
A; Status: preliminary; translated from GB/EMBL/DDBJ	
A; Accession: 149689	
A:Title: Mouse nerve growth factor gene: Structure and expression.  A:Weference number: IdoGae. MITH.RBD18855: BMTD-35701305	rowth facto
Mol. Cell. Biol. 7, 3057-3064, 1987	
R;Selby, M.J.; Edwards, R.; Sharp, F.; Rutter, W.J.	
A; molecule type: protein	rowth facto
A; Accession: A90366	
A; Reference number: A90366; MUID:73075048; PMID:4566923	
A; Title: Amino acid sequences of mouse 2.5S nerve growth factor. II. Isolation and ch	rowth facto
Biochemistry 12, 100-115, 1973	rve growth
A. Norde this bettere the meter by to browdy the amino tenminal testude and	rowth facto
A;Cross references: GB:K01759; NID:920051; PIDN:AAA39920.1; PID:9387495	tion
A; Residues: 1-307 <ull></ull>	
A: MOJECULE TYPE: MRNA	
A;Reference number: A93305; MUID:83244969; PMID:6688123	
A; Title: Human beta-nerve growth factor gene sequence highly homologous to that of mo	
Nature 303, 821-825, 1983	printed,
A; Cross references: GB: YUU850; NID: 93304; PLDN: CAAZ4ZZI.1; PID: 933365 R: Ullirich A.; Grav, A.; Berman, C.; Dull T.J.	ve a
A; Residues: 1-307 <sco></sco>	
A, MODECULE TYPE: MRNA	
A; Reference number: A93301; MUID:83167518; PMID:6336309	•
A) Title: Isolation and nucleotide sequence of a cDNA encoding the precursor of mouse	
R;Scott, J.; Selby, M.; Urdea, M.; Quiroga, M.; Bell, G.I.; Rutter, W.J. Nature 302. 538-540. 1983	
C;Accession: A93301; A93305; A90366; I49689; I52891; A01400; I49690	
C; Species: Mus musculus (house mouse)	
nerve growth factor beta chain precursor - mouse	
RESULT 1	

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A; Gene: NGFB
A; Introns: 21
C; Superfamily
C; Keywords: 9
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A;Title: Rat beta-nerve growth factor sequence and site of synthesis in the adult hippona, Reference number: 156570; MUID:89037223; PMID:3184206
A;Reference number: 156570
A; Title: Molecular cloning of a cDNA encoding the nerve growth factor precur A; Reference number: JT0343; MUID:89172070; PMID:3234767
A; Recession: JT0343
A; Recession: JT0343
A; Residues: 1-303 <FAH>
A; Residues: 1-303 <FAH>
A; Residues: 1-303 <FAH>
A; Cross-references: GB:M22748; NID:g202514; PIDN:AAA40599.1; PID:g202515
A; Cross-reference
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C;Keywords: glycoprotein; growth factor; homodimer
C;Keywords: glycoprotein; growth factor; homodimer
F;1-187/Domain: signal sequence and propeptide #status predicted <SIG>F;188-305/Product: nerve growth factor beta chain #status experimental
F;135,180/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;202-267,245-295,255-297/Disulfide bonds: #status experimental
F;332/Binding site: carbohydrate (Asn) (covalent) #status absent
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C:Species: Rattus norvegicus (Norway rat)
C:Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 16-Jul-1999
C:Accession: I56570
                                                                                                                                                                                                                                                                                                                                                                                                                      nerve growth factor beta chain precursor - multimammate C:Species: Mastomys natalensis C:Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text C:Accession: JT0343 R:Fahnestock, M.; Bell, R.A. Gene 69, 257-264, 1988
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; Pred. No. 1.8e-59;
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Pred. No. 1.7e-57;
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C;Superfamily: nerve growth factor beta chain C;Keywords: glycoprotein; growth factor; hormone F;1-121/Domain: propeptide #status predicted <PRO> F;122-241/Product: nerve growth factor beta chain #status F;146-154/Region: receptor binding #status predicted F;69,114/Binding site: carbohydrate (Asn) (covalent) #stat
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A; Residues: 1-241 <SCH>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nerve growth factor beta chain precursor - guinea pig
C;Species: Cavia porcellus (guinea pig)
C;Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change
C;Accession: JL0097
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J. Neurochem. 52, 1203-1209, 1989
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                                                                                                                                                                                                           A;Title: Human beta-nerve growth factor gene sequence highly A;Reference number: A93305; MUID:83244969; PMID:6688123 A;Accession: A01399
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A;MoLecule type: mRNA
A;Residues: 46-286 <BOR>
A;Cross-references: EMBL:X52599; NID:g29476; PIDN:CAA36832.1;
C;Comment: Nerve growth factor is found in submaxillary gland
                                                                                    A;Title: cDNA sequence of human beta-NGF. A;Reference number: S10253; MUID:90326556; A;Accession: S10253
                                                                                                                                                                                                                                                               R;Ullrich, A.; Gray, A.; Berman, Nature 303, 821-825, 1983
                                                                                                                                        R; Borsani, G.; Pizzuti, A.; Rugarli, Nucleic Acids Res. 18, 4020, 1990
                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-286 <ULL>
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                                                                    A; Status: translation not shown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSTHPVFHMGEFSVCDSVSVWVADKTTATDIKGKEVTVLAEVNVNNNVFKQYFFETKCRD 181
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Pred. No. 2.5e-55;
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Pred. No. 4.4e-54;
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C;Genetics:
A;Gene: GDB:NGFB
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C:Complex: nerve growth factor is composed of two alpha chains, two beta cha. C:Complex: nerve growth factor beta chain
C:Superfamily: nerve growth factor; submandibular gland
C:Keywords: glycoprotein; growth factor; submandibular gland
F:1-166/Domain: signal sequence and propeptide (fragment) #status predicted
F:167-284/Product: nerve growth factor beta chain #status predicted <MAT>
F:26,114,159,211/Binding site: carbohydrate (Asn) (covalent) #status predict
F:181-246,224-274,234-276/Disulfide bonds: #status predicted
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A; Title: A new marker (NGFB) on pig chromosome 4, isolated A; Reference number: 146614; MUID:94313891; PMID:8039422
A; Accession: 146614
                                                     nerve growth factor beta chain precursor - bovine (fragment) (;Species: Bos prinigenius taurus (cattle) (;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change : C;Accession: A26312 R;Meier, R.; Becker-Andre, M.; Goetz, R.; Heumann, R.; Shaw, A.; EMBO J. 5, 1489-1493, 1986 A;Title: Molecular cloning of bovine and chick nerve growth factual A;Reference number: A26312; MUID:86300647; PMID:2427334 A;Accession: A26312
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C;Species: Sus scrofa domestica (domestic pig)
C;Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 16-Jul-1999
C;Accession: I46614
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C;Genetics:
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 A; Cross-references: GB: M26809; NID: g163419; PIDN: AAA30666.1;
                   A; Residues: 1-125
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A; Residues: 1-229 <LAH>
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89.9%;
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Pred. No. 4.5e-53;
3; Mismatches 8
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Pred. No. 4.5e-53;
4; Mismatches 8
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NPVESGCRGIDSKHWNSYCTTTHTFYKALTTDEKQAAWRFIRIDTACVCVLSRKATR 119

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A; AGCIESSACH.
A; Molecule type: DNA
A; Residues: 118-243 <WIO>
A; Cross-references: GB:D00010; GB:N00010;
A; Cross-references: GB:D00010; GB:N00010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Comment: Nerve growth factor stimulates neurite outgrowth from sympathetic C;Superfamily: nerve growth factor beta chain C;Keywords: growth factor; homodimer; seminal vesicle F;6-125/Product: nerve growth factor #status predicted <MAT> F;20-85,63-113,73-115/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; not compared with conceptual translat: A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 121-243 <MEI>
A;Cross-references: GB:M26810; NID:g212446; PIDN:AAA48984.1;
R;Ibanez, C.F.; Hallboeoek, F.; Ebendal, T.; Persson, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:X04003; NID:g63697; PIDN:CAA27633.1; R;W10n, D.; Perret, C.; Frechin, N.; Keller, A.; Behar, G.; FEBS Lett. 203, 82-86; 1986
A;Title: Molecular cloning of the avian beta-nerve growth fa;Reference number: A24857; MUID:86248129; PMID:3720959
A;Accession: A24857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nerve growth factor beta chain precursor - (c;Species: Gallus gallus (chicken) C;Date: 05-oct.1088 #sequence_revision 05-oc. C;Accession: A26311; A24857; S00127; S12532
                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 126-243 <IBA>
                                                                                                                                                                                                                                                                                                                                    A;Title: Structure-function
A;Reference number: S12532;
A;Accession: S12532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBO J. 5, 1489-1493, 1986
A;TILLe: Molecular cloning of bovine and chick nerve growth factor A;Reference number: A26312; MUID:86300647; PMID:2427334
A;Accession: S00127
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A; Accession: A26311
                                                                                                                                                                             F;1-125/Domain: signal sequence #status predicted <SIG>F;126-243/Product: nerve growth factor beta chain #status
                                                                                                                                                                                                                            C; Keywords: growth factor
                                                                                                                                                                                                                                                C; Superfamily: nerve growth factor beta
                                                                                                                                                                                                                                                                                                               A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                         R; Ibanez, C.F.; Hallboeoek, EMBO J. 9, 1477-1483, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-243 <EBE>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R; Ebendal, T.; Larhammar, D.; Persson, EMBO J. 5, 1483-1487, 1986
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Local
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                                                                                                            Similarity
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87.4%;
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MUID:90228346; Ph
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                                                                                        Score 546; DB Pred. No. 3.3e 7; Mismatches
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Pred. No. 4.1e-52;
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                                                                                                                                                                                                                                                chain
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                                                                                                                                                                                                                                                                                                                                                             e growth factor:
PMID:2328722
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                                                                                                                                 Length 243;
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Brachet, P.;
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nerve growth factor beta chain precursor - African C;Speckes: Xenopus laevis (African clawed frog) C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 C;Accession: S14481 R;Carriero, F.; Campioni, M.; Cardinali, B.; Pieran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Koyama, J.; Inoue, S.; Ikeda, K.; Hayashi, K.
Blochim. Blophys. Acta 1160, 287-292, 1992
A;Title: Purification and amino-acid sequence of a nerve growth
A;Reference number: S28161; MUID:93120151; PMID:1477101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nerve growth factor beta chain - Russell's viper C;Species: Vipera russelli (Russell's viper) C;Date: 19-Mar-1997 #sequence_revision 19-Mar-19
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wrowth Factors 8, 77-86, 193
A;Title: Molecular cloning of a cDNA encoding a nerve growth A;Reference number: I51193; MUID:93192074; PMID:7916740
A;Accession: I51193
                                                                                                                                          C; Species: Bungarus
C; Date: 13-Sep-1996
C; Accession: I51193
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A; Residues: 1-235 <CAR>
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                                                                                                                                                                                                                        nerve growth factor
                                                                                                                                                                                                                                                    RESULT
151193
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                                                                                                                                                                                                                                                                                                                                                                                       VESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRK 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRASNP
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                                                                                                                                                                                                                                                                                                                                                           VPSGCRGIDAKHWNSYCTTTDTFVRALTMERNQASWRFIRINTACVCVISRK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HPVHNQGEFSVCDSVSVWVANKTTATDMRGNVVTVMVDVNLNNNVYKQYFFETKCKNPNP
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o the EMBL Data Library, October 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96;
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                                                                                                                                                                 precursor - many-banded krait
multicinctus (many-banded krait)
#sequence_revision 13-Sep-1996 #
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73.28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 475; DB 2;
Pred. No. 3.6e-42;
7; Mismatches 13
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.2e-48;
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B;Title: Purification, characterization, and partial amino acid sequence of ner A;Reference number: A01401; MUID:76114772; PMID:1247508
A;Accession: A01401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEBS Lett. 279, 38-40, 1991
A;Title: Amino acid sequences of
A;Reference number: S13927; MUID:
A;Accession: S13927
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A;Molecule type: mRNA
A;Residues: 1-243 <DAN>
                                                                                                                                                                                                                              RESULT
A58566
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A;Residues: 1-11,'p',13-14,'B',16,'TBT';20-21,'GV';23-27,'N',29-31;'AS',34,'S';36-48,
15-116 <HOG>
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C;Date: 30-Nov-1980 #sequence_revision 2
C;Accession: S13927; A01401
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           R;Oda, T.; Ohta, M.; Inoue, S.; Ikeda, K.; Fu
Blochem. Int. 19, 909-917, 1989
A;Title: Anino acid sequence of nerve growth
A;Reference number: A58566; MUID:90147847; PM
                                                                                                               nerve growth factor - Chinese cobra C; Species: Naja naja atra (Chinese C; Date: 16-Apr-1997 #sequence_revis: C; Accession: A58566
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F;14-78,56-106,66-108/Disulfide bonds: #status predicted
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Matches 78
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38-40, 1991
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MUID:91138755; PMID:1995338
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Pred. No. 2.1e-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 436.5; DB 1
Pred. No. 3.6e-38;
                                                                                                                                  cobra)
sion 25-Apr-1997 #text_change
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                   PMID:
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                   factor purified from the MID: 2619756
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A; Accession: A58566
A; Molecule type: protein
A; Residues: 1-116 < CDA>
A; Experimental source: venom
C; Comment: Nerve arouth facts
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C; Complex:
nerve growth factor beta chain precursor - southern platyfish C;Species: Xiphophorus maculatus (southern platyfish) C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change: C;Accession: 151709; S26674 R;Gotz, R.; Raulf, F.; Schartl, M.
J. Neurochem. 59, 432-442, 1992
                                                                                                                                    RESULT
151709
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A59218
A59218
C:Species: Naja naja kaouthia, Naja naja siamensis (monocle C:Species: Naja naja kaouthia, Naja naja siamensis (monocle C:Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_(C:Date: 31-Mar-2000 #text_(C:Date: 47-2-18): S13965
C:Accession: A59218: S13965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Comment: Nerve growth factor is necessary for
C;Complex: homodimer
C;Superfamily: nerve growth factor beta chain
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J. Neurosci. Res. 18, 293-298, 1987
A;Tille: Cobra nerve growth factor: structure and evolutionary comparison.
A;Reference number: A59218; MUID:88090976; PMID:3694712
A;Accession: A59218
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F;131-246/Product: nerve growth factor beta chain #status experimental <MAT>
F;144-208,186-236,196-238/Disulfide bonds: #status predicted
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A;Title: Amino acid sequences of nerve growth factors derived A;Reference number: S13927; MUID:91138755; PMID:1995338
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A; Residues: 1-246 <SE
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A; Gene: NGF
C; Superfamily: nerve growth factor beta chain
C; Keywords: glycoprotein; growth factor
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F; 1-14/Domain: signal sequence #status predicted <SIG>
F; 15-79/Domain: propeptide #status predicted <PRO>
F; 80-194/Product: nerve growth factor beta chain #status predicted
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C;Genetics:
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P13600 bos taurus
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MEDLLINE=94260545; PubMed=8201620;
Holland D.R., Cousens L.S., Meng W., Matthews B
Holland D.R., Cousens L.S., Meng W., Matthews B
"Nerve growth factor in different crystal forms
flexibility and reveals zinc binding sites.";
J. Mol. Biol. 239:385-400(1994).
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SL; M17298; AAA37687.1; ALT_INIT.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hallboeoek F., Ibanez C.F., Persson H.; 
"Evolutionary studies of the nerve grow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=89037223;
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Mammalia; F
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Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Beta-nerve growth NGFB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entities requires a license agreement (Some send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-Sprague-Dawley; TISSUE-LIV
MEDLINE-91222573; PubMed-2025430;
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HSSP; P01139;
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Sciurognathi; Muridae;
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Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                              "Rahnestock M., Bell R.A.;
"Molecular cloning of a cDNA encoding precursor from Mastomys natalensis.";
Gene 69:257-264(1988).
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SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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J. Neurochem. 52:1203-1209(1989).
-i- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT MAINTENANCE OF THE SYMPATHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF EMBRYONIC SENSORY NEURONS.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10141;
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HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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MEDLINE=89177243; PubMed=2926397;
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of beta-nerve
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les 6;
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P01138;
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Borsani G., Pizzuti A., Rugarli E.I.,
Sidoli A., Scarlato G., Barelle F.E.;
"CDNA sequence of human beta-NGF.";
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ullrich A., Gray A., Berman C., Coussens L., Dull T.J.; "Sequence homology of human and mouse beta-NGF subunit cold Spring Harb. Symp. Quant. Biol. 48:435-442(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=83244969; PubMed=6688123;
Ullrich A., Gray A., Berman C., D
"Human beta-nerve growth factor g
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MEDLINE-91222573;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hallboeoek F., Ibanez C.F., Persson H.; "Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 178-219 FROM N.A.
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                                            PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2;
                                                                                          Pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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FONCTION: NERVE GROWTH FACTOR IS IMPORTANT I FUNCTION: NERVE GROWTH FACTOR IS SENSORY I MAINTENANCE OF THE SYMPATHETIC AND SENSORY I STIMULATES DIVISION AND DIFFERENTIATION OF SEMBRYONIC SENSORY NEURONS.

SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALES SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                      HGNC:7808; NGFB.
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13, Last sequence update)
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factor precursor (Beta-NGF).
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sequence highly homologous
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SEQUENCE
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"A new marker (NGFB) on pig chromosome 4, isolated
consensus sequence conserved among species.";
Cytogenet. Cell Genet. 67:120-125(1994).
-i- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR
MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERV
STIMULATES DIVISION AND DIFFERENTIATION OF SYM
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MEDLINE-94313891; PubMed-80722;
Lahbib-Mansais Y., Mellink C., Yerle M.,
"A new marker (NGFB) on pig chromosome 4
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01-NOV-1997
                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See
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Mammalia; Eutheria;
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Pfam; PF00243; NGF; 1.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                       entities requires a license agreement (S or send an email to license@isb-sib.ch).
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HSSP; P01139; 1BET.
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O1-JAN-1990 (Rel. 1
15-JUL-1998 (Rel. 3
15-JUL-1998 (Rel. 3
                                                                                                                                                              the European Bioinformatics and use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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SEQUENCE
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Mammalia; Eutheria; Ce
Bovidae; Bovinae; Bos.
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InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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MEDLINE=86300647; PubMed=2427334;

Meier R., Becker-Andre M., Gotz R., Heumann R., Shaw A., Th

"Molecular cloning of bovine and chick nerve growth factor
delineation of conserved and unconserved domains and their
relationship to the biological activity and antigenicity of
EMBO J. 5:1489-1493(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00248; PROSITE; PS50270;
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                                                                                                                                                                                                                                                                 "Molecular cloning of t
                                                                                                                                                                                                                                                                                                                                                                                           EMBO
                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE-86300646; Ebendahl T., Larha
                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 118-243 FROM N.A. MEDLINE-86248129; PubMed-3720959; Wion D., Perret C., Frechin N., K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Archosauria; Aves; N
novel member abundantly Neuron 6:845-858(1991).
              MREDLINE-9122573; PubMed-2025430;
Hallboeck F., Ibanez C.F., Persson
"Evolutionary studies of the nerve
novel member abundantly expressed i
                                                                                 SEQUENCE OF 181-222
                                                                                                                                                                                                                                                                                                                                                                                                                             "Structure and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NGF_CHICK
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hes 103;
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Larhammar
                                                                                                                                                                                                                                                                                                                                                                                                                         arhammar D., Persson expression of the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NGF_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=3017695;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neognathae;
                                                                                 FROM
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Neognathae; Galliformes; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86.4%;
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BY SIMILARITY.

BY
                                               Persson H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 564; 1
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                                                                                                                                                                                                                                                                                      beta-nerve
                                                                                                                                                                                                                                                                                                                        Keller
                                                                                                                                                                                                                                                                                                                                                                                                                             chicken
               growth factor family in Xenopus ovary.";
                                                                                                                                                                                                                                                                                                                                                                                                                                             Η.,
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9.9e-54;
8;
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RESULT 9
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EMBL; X04067; CAA27703.1; -.
EMBL; X04067; CAA27703.1; -.
EMBL; M26810; AAA48984.1; -.
PIR; A24857; A24857.
PIR; A24857; A24857.
PIR; A26311; A26311.
HSSP; P01139; IBET.
InterFOIC; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF; 1.
PRINTS; PR00268; NGF; 1.
SMART; SM00140; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF; 1.
PROSITE; PS00248; NGF; 1.
GROWth factor; S19nal.
Growth factor; S19nal.
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SEQUENCE
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                                     SEQUENCE FROM N.A.

MEDLINE-91362944; PubMed-1888511;
Carriero F., Campioni M., Cardinali
Carriero F., Campioni of the ne
"Structure and expression of the ne
oocytes and embryos.";
Mol. Reprod. Dev. 29:313-322(1991).
                                                                                                                                                                              NGF_XENLA STANDARD; PRT; 231 AA.
P2161:
P2161:
01-MAY-1991 (Rel. 18, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Nerve growth factor precursor (NGF).
Nerve growth factor precursor (NGF).
Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROPEP
                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Ve
Amphibia; Batrachia; Anura; Mesobatrachia;
TISSUE-Liver;
            SEQUENCE OF 170-211
                                                                                                                             NCBI_TaxID-8355;
                                                                                                                                            xenopodinae;
                                                                                                                                                                                                                                                                                                                            186
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SUBUNIT: HOWODIMER, ASSOCIATED BY NONCOVALENT SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no restr by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT MAINTENANCE OF THE SYMPATHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF
                                  tes and e
                                                                                                                                                                                                                                                                                                                                                                           RPVSSGCRGIDAKHWNSYCTTTHTFVKALTMEGKQAAWRFIRIDTACVCVLSRKSGR
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                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
99; Conser
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126
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                                                                                                                                            Xenopus.
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              FROM N.A.
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                                                             Cardinali B., of the nerve 9
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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                Score 546; DB Pred. No. 9.2e 7; Mismatches
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                                                                                                                                                                                                                                                                 231
                                                                growth
                                                                                                                                                           Vertebrata; Euteleostomi;
ia; Pipoidea; Pipidae;
                                                                             Pierandrei-Amaldi
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.2e-52;
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                                                                 gene
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                                                                    Xenopus
                                                                                                                                                                                                                                                                                                                                242
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RESULT 10

NGF_DABRR

ID NGF_DABRR
AC P30894;
DT 01-JUL-1993 (
DT 01-NOV-1997 (
DT 01-NOV-1997 (
DE Nerve growth
OS Daboia russel
OC Lepidosauria,
OC Viperidae; V'
OX NCBI_TaxID=31
RN [1]
RP SEQUENCE.
RC TISSUE-Venom,
RX MEDLINE-9312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-9122573; PubMed-2025430;
Hallboeoek F., IDanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
Neuron 6:845-858(1991).
-!- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPM
                                                                                01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
01-NOV-1997 (Rel. 35, Last annotation update)
Nerve growth factor (NGF).
Daboia russelli russelli (Russell's viper) (Vipera russelli russelli (Russell's viper) (Vipera russelli russelli).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Viperinae; Daboia.
NCBI_TaxID-31159;
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SIGNAL
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HSSP; P01139;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR002072; Pfam; PF00243; NGF;
   MEDLINE=93120151; PubMed=1477101; Koyama J.-I., Inoue S., Ikeda K.,
                                         TISSUE-Venom
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SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALE
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DEVELOPMENT MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERVOUS SYSTEMS. IT STIMULATES DIVISION AND DIFFERENTIATION OF SYMPATHETIC AND
                                                                                                                                                                                                                                                                                                                                                       STHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          factor;
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128
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POTENTIAL.

NERVE GROWTH FACTOR.

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BY SIMILARITY.

OF CHARGE (GLCNAC...) (

N-LINKED (GLCNAC...) (

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N-LINKED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 532;
Pred. No. 2.
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          Hayashi K.;
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.8e-50;
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Best Local 9
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                                                                                                                                                                         Danse J.M., Garnier J.M.;

"Molecular cloning of a cDNA encoding a nerve grow from the krait, Bungarus multicinctus.";

Growth Factors 8:77-86(1993).

-I- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR ANAINTENANCE OF THE SYMPATHETIC AND SENSORY NEW STIMULATES DIVISION AND DIFFERENTIATION OF SYMPATHET STANULATES DIVISION AND DIFFERENTIATION OF SYMPATHET STANULATES DIVISION AND DIFFERENTIATION OF SYMPATHET BRAIN.
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PROSITE; PS50270; NGF_2; 1.
Glycoprotein; Growth factor.
DISULFID 12 77
DISULFID 55 105
DISULFID 65 107
CARBOHYD 21 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BUNMU
the Europuse by modified
                                                                                         This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NGF_BUNMU STANDARD; PRT; 2
934128;
01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Nerve growth factor precursor (NGF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bungarus multicinctus (Many-banded krait).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Elapidae; Bungarinae; Bungarus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Purification and amino-acid sequence of a the venom of Vipera russelli russelli."; Biochim. Biophys. Acta 1160:287-292(1992).
                                                                   between
                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-Venom gland;
MEDLINE-93192074; PubMed-7916740;
                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; S28161; S28161.
HSSP; P01139; 1BET.
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                   s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MAINTENANCE OF THE SYMPATHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF EMBRYONIC SENSORY NEURONS AS WELL AS BASAL NEURONS IN THE BRAIN.
SUBUNIT: HOMODIMER.
SIMILLARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                SUBUNIT: HOMODIMER.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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65 1
21
117 AA;
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73.2%;
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N-LINKED (GLCN)
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A64559C5FEC11F66 CRC64;
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  removed
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              There are no restrictions ng as its content is in
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Best Local S
Matches 83
            DELONGISTO THE NGF-BETA FAMILY.
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CHAIN
DISULFID
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SEQUENCE
                                                                                                                                                                                                                                                                                                       NGF_NAJNA
P01140;
PIR;
                                                                                                                                                                                                                                                                 21-JUL 1986 (Rel. 01, Created)
01-MAY-1991 (Rel. 18, Last sequence update)
01-JUL-1993 (Rel. 26, Last annotation update)
Nerve growth factor (NGF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2; Growth factor; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                MEDLINE-91138755; Pubw
Inoue S., Oda T., Koya
"Amino acid sequences
venoms.";
                                                                                                                                                                                                  TISSUE-Venom;
                                                                                                                                                                                                                                                   Naja naja (Indian cobra).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00268; NGF. ProDom; PD002052; NGF; 1.
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                                                                                                    Bradshaw R.A.;
                                                                                                           MEDLINE=76114772; PubMed=1247508; Hogue-Angeletti R.A., Frazier W.A.,
                                                                                                                               TISSUE-Venom;
                                                                                                                                                                                                                          Elapidae; Elapinae; Naja.
NCBI_TaxID=35670;
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                                                                                                                                      PRELIMINARY SEQUENCE
                                                                                                                                                        FEBS
                                                                                             "Purification, characterization,
                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                           Lepidosauria; Squamata; Scleroglossa;
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                                                                                                                                                                                                                                                                                                                                                          l Similarity
83; Conserv
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243
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                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                       PubMed=1995338;
Koyama J., Ikeda K.,
nces of nerve growth
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72.28;
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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                             Score 471; DB 1;
Pred. No. 1.1e-43;
4; Mismatches 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL
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venom.
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                                                                                                            Jacobs J.W.,
                                                                                   partial .";
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                                                                                                                                                                        derived
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                                                                                                                                                                                                                                            Colubroidea;
                                                                                                            Niall H.D.
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                                                                                             acid
                                                                                                                                                                                                                                                    Euteleostomi;
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                                         CHOLINERGIC
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Best Local :
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PRINTS; PRO0268; NGF:
ProDom; PD002052; NGF; 1.
SMART; SW00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                NGF_NAJAT STANDARD;
p21377;
01-MAY-1991 (Rel. 18, Create
01-MAY-1991 (Rel. 18, Last s
01-JUL-1993 (Rel. 26, Last a
Nerve growth factor (NGF).
                                                    -I- SUBUNIT: HONDIMER.
-I- SIMILARITY: BELONGS T
PIR: $13965; $13965.
HSSP; P01139; 1BET.
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                             Naja atra (Chinese cobra), and
Naja naja kaouthia (Monocled cobra) (Naja naja siamensis).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Elapidae; Elapinae; Naja.
NCBI_TaxID=8656, 8649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR002400;
InterPro; IPR002072;
Pfam; PF00243; NGF; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Growth
                                                                                                                                                                                                                                                       "Amino acid sequence of nerve growth factor of the Formosan cobra Naja naja atra."; Biochem. Int. 19:909-917(1989).
                                                                                                                                                                                   SPECIES-N. n. kaouthia; TISSUE-Venom; MEDLINE-91138755; PubMed-1995338; Inoue S., Oda T., Koyama J., Ikeda; "Amino acid sequences of nerve grow"
                                                                                                                                                                                                                                                                                         Oda
                                                                                                                                                                                                                                                                                                  SPECIES-N.n.atra;
MEDLINE-90147847;
                                                                                                                                                                                                                                                                                                                          SEQUENCE
                    InterPro; IPR002400; GF_cysknot.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                  SEQUENCE
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LINE-90147847; PubMed-2619756;
T., Ohta M., Inoue S., Ikeda K.,
                                                                                                                FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT MAINTENANCE OF THE SYMPATHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF EMBRYONIC SENSORY NEURONS AS WELL AS BASAL
                                                                                                    NEURONS IN THE BRAIN.
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                                                                                                                                                             Lett. 279:38-40(1991).
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77; Conserv
PR00438; GFCYSKNOT PR00268; NGF.
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116
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108 E
13022 MW;
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78
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                                                                                                                                                                                    Hayashi K.;
factors deri
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Y NERVOUS SYSTEMS. IT
IF SYMPATHETIC AND
L FOREBRAIN CHOLINERGIC
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PROSITE; PS.
Growth factor.
DISULFID 14
CULFID 56 10.
TUD 66 108
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Nerve growth factor
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                     PRINTS; PRO0268; NGF: 1.
PRODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF=1; F
PROSITE; PS50270; NGF=2; 1
Growth factor; S1gnal.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Xiphophorus maculatus (Southern platyfish).

Bukaryota; Metazoa; Chordata; Cranilata; Vertebrata; Euteleos

Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neotele

Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;

Cyprinodontiformes; Poeciliidae; Xiphophorus.
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Growth
SIGNAL
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                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/an or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                  structure and evolution.";
                                                                                                                                                                                                                                                                                                                                                               MEDIINE-92333301; PubMed-1629719; Gotz R., Raulf F., Schartl M.; "Brain-derived neurotrophic factor structure and function than nerve 9
                                                                                                                                                                                                                                                                                                                            J. Neurochem. 59:432-442(1992).
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM
                                                                                            HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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                                                                                                                   EMBL; X59941;
HSSP; P01139;
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SUBUNIT: HOMODIMER.
SIBULARITY: BELONGS TO THE NGF-BETA FAMTIV
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76; Conser
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SM00140; NGF; 1.
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(Rel. 40, Last annotation
factor precursor (NGF)
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ProDom; PD002052; NGF: 1.
SMART; SM00140; NGF: 1.
PROSITE; PS00248; NGF-1; 1
PROSITE; PS50270; NGF-2; 1
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15-JUN-2002 (Rel. 41, Last annotation update)
Neurotrophin-7 precursor (NT-7) (Fragment).
NTE7 OR NT7 OR NNT.
Cypring are----
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093474;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cyprinus carpio (Common carp).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopteryqii; Neopteryqii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Cyprinus.
NCBI_TaxID-7962;
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16-OCT-2001 (Rel. 40, Last seg
15-JUN-2002 (Rel. 41, Last ann
                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lal K. O., Fu W. Y., IP F.C.F., IP N:Y.;
"Cloning and expression of a novel neurotrophin, NT-7, from carp.";
MO1. Cell. Neurosci. 11:64-76(1998).
-I- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=9618228;
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Pred. No. 4.9e-35;
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Listing first 45 summaries
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re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
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1: sp_archea:*
2: sp_bacteria
3: sp_fung1:*
4: sp_human:*
5: sp_inverteb:
6: sp_mammal:*
7: sp_mhc:*
8: sp_opage:*
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Gapop 10.0 , Gapext 0.5
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sp_rvirus:*
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         2, 2002, 15:05:42; Search time 18.7245 Seconds (without alignments) 1331.501 Million cell updates/sec
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         13
6
11
                                                                                                      613
                            Q9P2Q8
Q9UXF1
Q9UXF1
Q9UXF0
Q9UXB9
Q91XB4
Q9EP60
Q9E960
Q9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
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Q96p60 homo sapien
Q9n183 macaca fusc
Q9nw38 bothrops ja
Q9dex9 crotalus du
Q9ttc3 cervus elap
Q9p224 homo sapien
Q91928 xiphophorus
Q9n182 macaca fusc
Q9cyl3 mus musculu
Q97759 ailurus ful
                                                                                                                                                                                                                                  O9p2q8 homo sapien
Q9ukl8 homo sapien
Q9ukl8 homo sapien
Q9n2f1 pan troglod
Q9n2f0 gorilla gor
Q9n2e9 pongo pygma
Q91xb4 mus musculu
                                                                                                                                                                                                                                                                                                    Q9p2q8
Q9uk18
Q9n2f1
                                                                                                                                                                                                                                                                                                                                                                                               Description
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5	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
160	160	160	160	160	161	194	195	197	220	221	221	221	221	221	221	221	221	227	262.5	270	296.5	305	314.5	318.5	318.5	319.5	N	N
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186	186	185	185	184	185	42	42	42	85	85	85	8 5	85	<b>8</b> 5	85	85	85	85	186	324	101	247	246	246	177	270	246	249
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Q9bf12 choloepus d				~	ω	002802 trichosurus				002801 tachyglossu		002792 notoryctes			002795 ornithorhyn			002790 macropus fu	Q9j5d9 fowlpox vir	Q9xy95 lampetra fl			Q8qg75 phrynocepha	cyclophic		brachydan	Japa	Q8vhh4 mus musculu

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                                                                                  Query Match
Best Local Similarity
Matches 107; Conserv
                                                                                                                                          PRINTS; PR00268; NGF; 1.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF-1; 1.
PROSITE; PS50270; NGF-2; 1.
NON_TER 241 241
SEQUENCE 241 AA; 26998 MW;
                                                                                                                                                                                                                                         HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                         "Silver Project."; Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AB037517; BAA90437.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Beta nerve growth factor (Fragment).
                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
Kitano T., Kobayakawa H., Saitou N.;
                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9P2Q8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9P2Q8;
                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                          BETA-NGF
                            122 SSSHPIFHRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRD 18:
62 SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR 120
                                                         N
                                             SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA 61
                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                               26998 MW;
                                                                                                89.48;
                                                                                  Score 584; DB 4; Length 241; Pred. No. 1.1e-58; 4; Mismatches 8; Indels
                                                                                                                                             D5531ED825D96C14 CRC64;
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RESULT 3
Q9N2F1
ID Q9N2
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Best Local S
Matches 107
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 241 AA; 26959 MW;
SEQUENCE FROM N.A.

STRAIN-HIMP-220;

Kitano T., Kobayakawa H., Sail

"Silver Project.";

Submitted (JAN-2000) to the EN

EMBL; ABO37518; BAA90438.1; -

HSSP; P01139; 1BET.
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01-MAY-2000 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O9N2F1; PRELIMINARY;
O9N2F1; O1-OCT-2000 (TrEMBLrel 15,
O1-OCT-2000 (TrEMBLrel 15,
O1-DEC-2001 (TrEMBLrel 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chung Kuo Ying Yung [2]
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Tong Y., Wang H., Chen V
"Cloning and sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
[1]
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tong Y., Wang H.;
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                                                                                                                                                                                                                                                                                                                                   Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  BETA-NGF
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                                                                                                                                                                                                                                                                                                 NCBI_TaxID-9598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Beta-nerve growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
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107; Conserv
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Chen W.;
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Pred. No. 1.1e-58;
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RESULT
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
SMOSITE; PS00248; NGF=1; 1.
PROSITE; PS00270; NGF=2; 1.
NON_TER 241 241
SEQUENCE 241 AA; 26868 MW.
                                                                                                                                                                                                                                                                              PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SW00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
Q9N2E9
Q9N2E9;
01-OCT-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                       Submitted (JAN-2000) to the EMBL; AB037519; BAA90439.1; HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-GORILLA-U1;
Kitano T., Kobayakawa H., Saitou
"Silver Project.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gorilla gorilla (gorilla).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Beta-nerve growth factor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9N2F0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9593;
                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
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                                                                                                                                                          SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR 120
                                                                                                          PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
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107; Conserv
                                                                                                                                                                                                               al Similarity
107; Conserv
                                                                                                                                                                                                                                                                      241
241 AA;
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 (TrEMBLrel.
                                        PRELIMINARY;
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                                                                                                                                                                                                                                                                       26915 MW;
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89.9%;
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15,
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Pred. No. 1.1e-58;
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             Created)
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Pred. No. 1.1e-58;
1; Mismatches 8
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Matches 107
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Best Local :
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01-DEC-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
Similar to nerve growth
                                                                                                                                                                                                                                                   Submitted (JUL-2001) to the EMBL; BC011123; AAH11123.1; MGD; MGI-97321; NGfb. InterPro; IPRO02072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                           TISSUE-SALIVARY GLAND;
Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pongo pygmaeus (Oran
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kitano T., Kobayakawa H.,
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Beta-nerve growth factor (Fragment).
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                   SSTHPVFHMGEFSVCDSVSVMVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA 61
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SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA
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107; Conserv
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                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                 .s (Mouse).
Metazoa; Chordata; C
™ heria; Rodentia; ?
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tazoa; Chordata;
heria; Primates;
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89.9%;
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    Created)
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    factor, beta.

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                                                                                                        Score 577;
Pred. No.
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Pred. No. 1
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Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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                                                                                    Mismatches
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                                                                                                        9e-58;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .1e-58;
                                                                                                                           DB 11;
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RESULT
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Best Local
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01-DEC-2001
01-MAR-2002
                                                                                      MEDLINE-99270338; PubMed=10340513; Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Miyashita Y.; Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Miyashita Y.; "Quantitative evaluation of neurotrophin and trk mRNA expression visual and limbic areas along the occipito-temporo-hippocampal pain adult macaque monkeys."; "J. Comp. Neurol. 408:378-398(1999).
                                                                                                                                                                                           Beta nerve growth factor (Fragment).

Macaca fuscata (Japanese macaque).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;

Mammalia; Eutheria; Primates; Catarrhini; Cercopithe
Cercopithecinae; Macaca.

NCBI_TaxID=9542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00243; NGF; 1.
ProDom; PD002052; NGF; 1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 241 AA; 26964 MW; 7452
         Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Submitled (JAN-2000) to the EMBL/GenBank/DDBJ EMBL; AF222682; AR53790.1; -. HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang Y., Zhang B., Zhou Y., Submitted (AUG-2001) to the I EMBL; AF411526; AAL05874.1; InterPro; IPR002072; NGF.
                                                                   SEQUENCE FROM N.A.
                                                                                                                                                             TISSUE-BLOOD
                                                                                                                                                                       SEQUENCE FROM N.A.
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Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q96P60;
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                                                        TISSUE-BLOOD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nerve growth
                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
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Pred. No. 9.
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Catarrhini;
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Best Local Similarity
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O90W38;
O1-DEC-2001 (TrEMBLrel. 19, Cre
O1-DEC-2001 (TrEMBLrel. 19, Las
O1-MAR-2002 (TrEMBLrel. 20, Las
O1-MAR-2002 (TrEMBLrel. 20, Las
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; pF00243; NGF; 1.
PRINTS; pR00268; NGF;
ProDom; pD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; pS00248; NGF=1; 1.
PROSITE; pS50270; NGF=2; 1.
NON_TER
217
217
Q9DEZ9
Q9DEZ9;
01-MAR-2001
01-MAR-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kashima S., Pereira J.O., Astolfi Filho S., Soares A.M., Cintra A.C.O., Giglio J.R., Franca S.C.; "Molecular cloning and cDNA sequence of a nerve growth factor precursor from Bothrops jararacussu venomous gland."; Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AY007318; AAG12169.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bothrops jararacussu (Jararacussu),
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Scleroglossa; Serpentes; Colubroidea;
Viperidae; Crotalinae; Bothrops.
NCBI_TaxID=8726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
ProDom; PF002052; NGF; 1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 241 AA; 27161 MW; AC57F724A6531A8F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-VENOM GLAND;
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217 AA;
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Last annotation updat
h factor.
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  Last sequence update)
Last annotation update)
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Pred. No. 1
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      Query Match
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Matches 77
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"Cloning and sequence of a cDNA coding for a rattlesnake (durissus terrificus) nerve growth factor.";

T durissus terrificus) nerve growth factor.";

Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.

EMBL; AF306533; AAG30924.1; ".

R EMBL; AF306533; AAG30924.1; ".

R HSSP; P01139; 1BET.

R InterPro; IPR002072; NGF.

R Pfam; PF00243; NGF.

R Pfam; PF00243; NGF.

R PFAINTS; PR00268; NGF.

R PRODOM; PR002052; NGF; 1.

R SMART; SM00140; NGF; 1.

R PROSITE; PS00248; NGF_1; 1.
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                                                                                                                                                                                                                                                                                                                                                                                         "NGF expression in Antler.";
Submitted (APR-1999) to the EMEMBL; AF145043; AAF17235.1; -.
HSSP; P01139; IBET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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                                                                                                                                                                                                                                     PROSITE; PROSITE;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Crotalus durissus terrificus (South American
Eukaryota; Metazoa; Chordata; Craniata; Verte
Lepidosauria; Squamata; Scleroglossa; Serpent
Viperidae; Crotalinae; Crotalus.
                                                                                                                                      SEQUENCE
                                                                                                                                                                       NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria;
Cervidae; Cervinae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Suttie J.M.;
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         l Similarity
77; Conser
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PS50270; NGF_2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N.A.
                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stanton J.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor
                                                                                                                                         9876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata; Craniat Cetartiodactyla; Cervus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72.18;
73.28;
                                          64.9%;
88.5%;
                                                                                                                                         MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 471; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL/GenBank/DDBJ
                                          Score 424;
Pred. No.
                                                                                                                                         17EE06E49AF7A0A4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clark
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                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D.E.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                merican rattlesnake).
a; Vertebrata; Euteleost
Serpentes; Colubroidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
DB b;
6.5e-41;
6;
                                             σ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sheard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
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                                                                        Length 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pecora; Cervoidea;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Harris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241;
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(Crotalus
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             Gaps
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Best Local S
Matches 74
                                                                                                   D Q91988 PRELIMINARY; PRT; 286 AA.
C Q91988;
C Q91988;
C Q91988;
T Q1-NOV-1996 (TrEMBLrel. Q1, Created)
T Q1-NOV-1996 (TrEMBLrel. Q1, Last sequence update)
T Q1-JUN-2001 (TrEMBLrel. 17, Last annotation update)
E Neurotrophin-6 precursor.
S Xiphophorus maculatus (Southern platyfish), and
S Xiphophorus heller1.
S Xiphophorus heller1.
C Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel
C Actinopterygil; Neopterygil; Percomorpha; Atherinomor
C Cyprinodontiformes; Poeciliidae; Xiphophorus.
X NCBL_TaxID-8083, 8084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00268; NGF.
PRINTS; PR002052; NGF; 1.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene in the Chinese population." Chung-Kuo I Hsueh Ko Hsueh Yuan
                                          SEQUENCE FROM N.A. MEDLINE-95059452; PubMed-7969471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-DCC-2001 (TrEMBLrel. 19, Truncated beta nerve growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE-95236507;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9P2Z4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50270; NGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; S76884; AAB34114.2;
HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L1 Y., Huang B., Cai L., "Amplification, cloning and sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9P2Z4;
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    Ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                      Koster R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9729 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed-7720122;
                        Winkler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 416; DB Pred. No. 5.3e
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Last sequence update)
Last annotation update)
factor (Fragment).
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                                                                                                                                                    Percomorpha; Atherinomorpha;
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                      Raulf
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                    F:
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5.3e-40;
9;
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                      Lottspeich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                         Euteleostomi;
; Neoteleostei;
                      Έ
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                    Schartl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
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Best Local S
Matches 67
                                                                                                                                                                                                                                TISSUE-BLOOD;
Hashimoto T., Okuno H., Tokuyama W.
"Expression of brain-derived neurot
their receptor messenger RNAs in mc
Neuroscience 0:0-0(2000).
EMBL; AF222683; AAF33791.1; -.
HSSP; P20783; 1B8K.
PRINTS; PRO0268; NGF; 1.
PRODOM; PRO02682; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF; 1; 1.
PROSITE; PS50270; NGF, 2; 1.
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BMBL; L36942; AAA619231; -.

EMBL; L36325; AAA61922.1; -.

EMBL; L36326; AAA61921.1; -.

HSSP; P01139; IBET.

InterPro; IPR002072; NGF.

Pfinm; PF00243; NGF.

PRINTS; PR00268; NGF.

PRODOR; PD00252; NGF; 1.

PROCEUR: ACCOUNTY OF THE PROPOSE CONTROLOGY.

PRINTS; SMO0140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Miyashita Y.;

"Quantitative evaluation of neurotrophin and trk mRNA expression

"Quantitative evaluation of neurotrophin and trk mRNA expression

"Compared to the control of the contro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9N182;
01-OCT-2000 (TrEMBLrel. 15,
01-OCT-2000 (TrEMBLrel. 15,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
SEQUENCE
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                                                                                                                                                              InterPro; IPRO02072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cercopithecinae;
NCBI_TaxID=9542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Meurotrophin-3 (Fragment).
Macaca fuscata (Japanese macaque).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=99270338; PubMed=10340513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-BLOOD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9N182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in adult macaque monkeys.";
J. Comp. Neurol. 408:378-398(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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PS50270; NGF_2;
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nilarity 50.0%;
Conservative 18
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286
31424 MW;
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Last annotation update)
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Pred. No. 1.6e
L8; Mismatches
                                                                                                                                                                                                                                                                                                                                    yama W., Li Y.X., Miyashita Y.;
neurotrophic factor, neurotrophin-3
in monkey rhinal cortex.";
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5607DBA66792E12D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
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RESULT 15
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RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Altawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Altawa K., Izawa M., Nishi K., Kiyosawa H., Kasukawa T., Saito R.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hayashtaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 58
                                                                   Query Match
Best Local S
Matches 61
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NON_TER
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE-EMBRYO;
                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 17, Create 01-JUN-2001 (TrEMBLrel. 17, Last s 01-DEC-2001 (TrEMBLrel. 19, Last a Brain derived neurotrophic factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BDNF.
                                                                                                                                                                                        PRINTS; PR00268; NGF. ProDom; PD002052; NGF; 1. SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                              "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID-10090;
                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                        MGD; MGI:88145; Bdnf.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                            EMBL; AK017559;
                                                                                                                                                                                                                                                                            MGD; MGI:88145;
                                                                                                                                                                                                                                                                                               HSSP;
                                                                                                                                                                                                                                                                                                                                                                   dayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142 HRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              202
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRGIDSKHWNSYCTTTHTFVKALTTD-EKQAAWRFIRIDT 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HMGEFSVCDSVSVMVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRASNPVESG 68
                 GEFSVCDSVSVWV--GDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRASNPVESG 68
GELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYTKEG
                                                                                                                                                                                                                                                                                               P23560;
                                                                     61;
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                                                                                     Similarity
                                                                                                                                      PS00248; NGF_1; 1.
PS50270; NGF_2; 1.
153 AA; 17519 MW;
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241
241 AA;
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nilarity 58.0%;
Conservative 2:
                                                                     Conservative
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241
27803 MW;
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Last annotation update)
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Pred. No. 3e-30;
0; Mismatches
                                                                Score 325.5; DB 11;
Pred. No. 2.4e-29;
Prematches 32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AB95E457C7B07113 CRC64;
                                                                                                                                         CA8EB8944CEE5B37 CRC64;
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                                                                                                     DB 11;
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                                                                     Indels
                                                                                                     Length 153;
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Search completed: December 2, 2002, 15:12:01 Job time: 18.7245 secs

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Title:
Perfect score:
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Maximum
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No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB seq length: 0
DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
       protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Issued_Patents_AA:*
1: /cgn2_6/ptodata/1,
2: //gn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: //gn2_6/ptodata/1,
5: //gn2_6/ptodata/1,
6: //gn2_6/ptodata/1,
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653
1 PSSTHPVFHMGEFS
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Match
       262574 seqs, 29422922 residues
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Maximum Match 100%
Listing first 45 summaries
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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       BB
                 US-09-675-503-3

US-08-441-513A-1

US-08-970-865-3

US-08-970-865-3

US-07-979-630-1

PCT-US93-11292-1

US-07-979-630-1

PCT-US93-11292-1

US-09-975-503-2

US-08-970-865-2

US-08-970-865-2

US-08-9440-049-3

US-08-441-511A-3

US-08-445-541E-1

US-09-066-065A-1

US-09-066-065A-1

US-09-066-056A-1

US-09-066-295-3

US-08-451-947-3

US-08-451-947-3

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US-08-451-947-3

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US-08-928-694-5
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Compugen Ltd.
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Matches  Matches  1  1  61  7  61  7  121	e 90fte SMILLIERRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR	
Local Similarity 100.0%; Pred. no. 2e-73; les 121; Conservative 0; Mismatches 0; Indels 0; G 1 PSSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCR	1 1 575-503-3 575-503-3 ant No. 6423831 nt No. 6423831 nt No. 6423831 nt No. 6423831 LICANT: Button, Louis E. LICANT: Schmelzer, Charles H. LICANT: Beck, Joanne T. LICANT: Beck, Joanne T. LICANT: SCHMELZER, CONTAINILE OF INVENTION: MIXTURE CONTAINILE OF INVENTION: USING HYDROPHOBIC REFERENCE: GENERT. 03702 RENT FILING DATE: 1996-11-15 DATE: 1996-11-15 DATE: 1997-05-29 DR APPLICATION NUMBER: 60/03083 DR FILING DATE: 1997-05-29 DR APPLICATION NUMBER: 60/047855 DR APPLICATION NUMBER: 09/363573 DR FILING DATE: 1997-01-14 DATE: 1999-07-29 BER OF SEQ ID NOS: 6 DRAPE FASTSEQ for Windows Version DNOS: 6 DRAPE SEG ID NOS: 6 DRAPE: PATT DANISM: mouse 675-503-3  MATCh 100.0%; Score	55611
Cor Cor VFHD 	Applica Applica A23831 Burton Burton Schmel Beck, VenTion VenTion VenTion CaTION G DATE: G DATE: G DATE: G DATE: G DATE: G DATE: CATION	888888888888888888 555556667788888899
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RESULT 2 US-08-440-049-1 ; Sequence 1, Application US/08440049

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                                                                                                                                                                                                                                                                                                       RESULT 3
US-08-441-513A-1
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Best Local :
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                  Sequence 1, Application US/08441513A Patent No. 5981480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 120;
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INFORMATION FOR SEQ ID NO:
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MEDIUM TYPE: 3.5 inch, 1.44 MI
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DO
SOFTWARE: WinPatin (Genentech
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: TOICHIA, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P090
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                     GENERAL INFORMATION:
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APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
APPLICANT: WINSLOW, JOHN W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 120 amino acid
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PRIOR APPLICATION DATA:
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
                                                                                                                                                           APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
TITLE OF INVENTION: Pantropic Neurotrophic Factors
NUMBER OF SEQUENCES: 20
                                                                                                                                                                                                                                 APPLICANT:
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STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                        STREET:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX:
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                                      ZIP: 94080
                                                                         STATE:
                                                     COUNTRY:
                                                                                                                           ADDRESSEE:
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Amino Acid
                                                                                      SSEE: Genentech, Inc.
r: 1 DNA Way
South San Francisco
                                                                      California
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Louis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: TOICHIA, PhD., Timoth, REGISTRATION NUMBER: 36,700 REGISTRATION NUMBER: POTELECOMMUNICATION INFORMATION: TELEPHONE: 650/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: UFILING DATE: 15-May-1 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/0
FILING DATE: 11/15/1996
                                                                                                                                                                                                                                    SOFTWARE: WinPatin (Ge
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
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MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Louis E. Burton, Charles H. Schmelzer, Joanne T. Beck TITLE OF INVENTION: Purification of NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
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FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION
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NAME: TOTCHIA, PhD., Timothy
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P10
TELECOMMUNICATION INFORMATION:
                                                                                                                            FILING DATE: 11/15/19
PRIOR APPLICATION DATA:
                                                       APPLICATION NUMBER: 60/04 FILING DATE: 5/29/1997 ATTORNEY_AGENT INFORMATION: NAME: Torchia, PhD., Timo
                                                                                                                                                                                         TILING DATE: 14-No. 6005081-1997 CLASSIFICATION: 530 RIOR ADDITION:
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STATE: California
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Amino Acid
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                                                       Timothy E.
                   P1063R2
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GENERAL INFORM
                                                                                Query Match
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                                                   Matches
                                                                                                                                                                                       TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 3:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/047855
FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/970,865
FILING DATE: 14-No. 6184360-1997
APPLICATION NUMBER: 60/030838
FILING DATE: 11/15/1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/363,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: PUNUMBER OF SEQUENCES: (CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 120 amino acids TYPE: Amino Acid
                                                                                                                                                                                                                                                       NAME: Torchia, PhD., Timothy E. REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P1063R2
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
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CITY: South San Francisco
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2 SSTHPVFHMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRA 61
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                                                                  Similarity
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                                              Score 646; DB 4; ]; Pred. No. 1.5e-72; 0; Mismatches 0;
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                                                                               Length 120;
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RESULT 7
US-07-979-630-1
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GENERAL INFORMATION:
                                                             Sequence 1, Application US/07979630 Patent No. 5488099
                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                  Matches
GENERAL INFORMATION:
APPLICANT: Persson,
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 120 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTTWARE: patin (Genentech) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: TOTChia, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Genente
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TELEX: 910/371-7168
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CITY: South San Francisco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                               98.9%; Score 646; DB 5; 100.0%; Pred. No. 1.5e-72;
              et al.
Multifunctional
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Regeneron Pharmaceuticals,
STREET: 777 Old Saw Mill River Road

Neurotrophic

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TELEPAN: 914-347-2113

INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
ELENCTH: 120 amino acids
TYPE: amino acids
TYPE: amino acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
MOLECULE TYPE: protein
US-07-979-630-1
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/979,630
FILING DATE: 20-NOV-1992
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/847,369
APPLICATION NUMBER: US 07/847,369
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application PC/TUS9311292 GENERAL INFORMATION:
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Best Local :
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MEDIUM TYPE: Floppy disk
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          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/847,369
FILING DATE: 06-MAR-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Multifunctional Neurotrophic Factors NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Kempler Ph.D., Gail M. REGISTRATION NUMBER: 32,143 REFERENCE/DOCKET NUMBER: REG
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                                                                                                                                                                                                                                                                         STREET: 777 Old
CITY: Tarrytown
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 06-MAR-1992
                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0,
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                                                                                  CLASSIFICATION:
                                                                                                    APPLICATION NUMBER: PCT/
FILING DATE: 19-NOV-1993
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Local Similarity 94.2%;
es 113; Conservative
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Kempler
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Pred. No. 4.4e-69;
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US-09-675-503-2
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              RESULT 10
US-08-970-865-2
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PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/04
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/97
PRIOR FILING DATE: 1997-11-14
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 Sequence
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                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Schmelzer, Charles H.
APPLICANT: Beck, Joanne T.
APPLICANT: Beck, Joanne T.
TITLE OF INVENTION: ISOLATION OF NEUROTROPHINS FROM A
TITLE OF INVENTION: MIXTURE CONTAINING OTHER PROTEINS AND NEUROTROPHIN VARIANTS
TITLE OF INVENTION: USING HYDROPHOBIC INTERACTION CHROMATOGRAPHY
FILE OF INVENTION: GENERY. 037C2
FILE REFERENCE: GENERY. 037C2
CURRENT APPLICATION NUMBER: US/09/675,503
CURRENT FILING DATE: 2000-09-29
CURRENT FILING DATE: 60/030838
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-0
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                                                                                                                                                                                                                                                                                                     TYPE: PRT
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REFERENCE/DOCKET NUMBER: RECTELECOMMUNICATION INFORMATION:
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Local Similarity 94.2%;
es 113; Conservativo
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5. 6423831
2, Application US/08970865
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90.8%;
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pred. No. 4.2e-66;
3; Mismatches 8
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Pred. No. 4.4e-69;
4; Mismatches 3
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RESULT 11
US-09-363-573-2
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Best Local Similarity
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FILING DATE: 11/15/1996
PRIOR APPLICATION DATE: 60/047855
APPLICATION NUMBER: 60/047855
APPLICATION INFORMATION:
NAME: TOICHIA, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: p1063R2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/2225-8674
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                         GENERAL INFORMATION:
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CITY: South San Fra
CTATE: California
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 Inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                             NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
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CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                       APPLICANT: Louis E. TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Louis E. TITLE OF INVENTION:
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                                                                                     STREET: 1 DNA HLJ
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 120 amino acids
TYPE: Amino Acid
TOPOLOGY: Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/970,865 FILING DATE: 14-NO. 6005081-1997 CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                       62 SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                    61 PNPVDSGCRGIDSKHWNSYCTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 119
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1 DNA Way
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    Burton, Charles
Purification of

    Burton, Charles H. Schmelzer,
    Purification of NGF

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NGF
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RESULT 12
US-08-440-049-3
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Best Local Similarity 90.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/253937
FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/047855
FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
NAME: TOrchia, PhD., Timothy I
REGISTRATION NUMBER: 36,700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/970,865
FILING DATE: 14-No. 6184360-1997
APPLICATION NUMBER: 60/030838
FILING DATE: 11/15/1996
PRIOR APPLICATION NUMBER: 60/047655
                                                                                                                                                     SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 120 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
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APPLICANT: Winslow, John W.
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CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: WinPatin (Genentec
                                                                                                                                                                                                                                                                                                  STREET: 460 Point San Brun
CITY: South San Francisco
STATE: California
                                                                                                      APPLICATION NUMBER: US/08/440,049 FILING DATE: 12-May-1995 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 119
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NAME: Torchia, Timothy REGISTRATION NUMBER: 36
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Pred. No. 3e-65;
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REFERENCE/DOCKET NUMBER:

P0905C2

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Sequence 3, Application US/08441513A

Patent No. 5981480

GENERAL INFORMATION:
APPLICANT: Urfer, Roman
APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
TITLE OF INVENTION: Pantropic Neurotrophic Face
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 120 entire acids
TYPE: Amino Acid
                                                                                                                                                                                                           COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 1nch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOSTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/441,513A
FILING DATE: 15-May-1995
CLASSIFICATION: 435
CRASSIFICATION DATA:
APPLICATION NUMBER: 08/25337
APPLICATION NUMBER: 08/25337
APPLICATION NUMBER: 08/25397
ETILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: TOTChia, PDD., Timothy E.
REGISTRATION NUMBER: 36,700
REGERENCE/DOCKET NUMBER: P0905C3
TELEPHONE: 650/25-8674
TELEPHONE: 650/25-8674
TELEPHONE: 650/25-9881
TELEPHONE: 650/25-9881
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Best Local
                                                                  Query Match
Best Local Similarity
                                                   Matches
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INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
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STREET: 1 ...
CITY: South San Fra
CTATE: California
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                                                                                                                                                  TYPE:
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Local Similarity 89.9%;
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                                                                                                                                                  Amino Acid
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San Francisco
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                                                                  89.48;
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                                                   Score 584; DB Pred. No. 7.2e 4; Mismatches
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Pred. No. 7.2e-65;
4; Mismatches 8
                                                                    DB 2;
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GENERAL INFORMATION:
APPLICANT: Presta, Leonard
APPLICANT: Urfer, Roman
APPLICANT: Urfer, Roman
APPLICANT: Winslow, John
TITLE OF INVENTION: NGF VARIANTS
FILE REFERENCE: GENENT.039A
CURRENT APPLICATION NUMBER: US/08/845,541B
CURRENT FILING DATE: 1999-04-25
NUMBER OF SEQ ID NOS: 38
SOFTWARE: FastsEQ for Windows Version 4.0
SEQ ID NO 1
LENCTH: 120
TYPE: PRT
ORGANISM: homo sapien
US-08-845-541B-1
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SEQ ID NO 31
LENGTH: 120
TYPE: PRT
ORGANISM: Homo sapiens
US-08-581-662-31
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US-08-581-662-31
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US-08-845-541B-1
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Job time : 9.36928 secs
           Search completed: December
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Patent No. 6121235
GENERAL INFORMATION:
APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
FILE REFERENCE: P0981
CURRENT APPLICATION NUMBER: US/08/581,662
CURRENT FILING DATE: 1995-12-29
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Best Local Similarity 89.9%;
Matches 107; Conservative
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Best Local (
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                                                                             SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR 120
                                                           PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR
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Pred. No. 7.2e-65;
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Result
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Maximum DB
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Perfect score:
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1: /cgn2_6/ptodata/1/pubpaa/U
2: /cgn2_6/ptodata/1/pubpaa/U
3: /cgn2_6/ptodata/1/pubpaa/U
4: /cgn2_6/ptodata/1/pubpaa/U
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11: /cgn2_6/ptodata/1/pubpaa/U
13: /cgn2_6/ptodata/1/pubpaa/U
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        Match
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Listing first 45 summaries
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    /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
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    /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
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    /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
    /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*
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  12 US-10-072-681-3
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US-08-450-84.2-5
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US-09-798-338-4
US-09-798-338-6
10 US-09-798-338-6
10 US-09-798-338-6
10 US-09-798-338-9
US-09-798-338-9
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452.778 Million cell updates/sec
Sequence 3, Appli
Sequence 5, Appli
Sequence 16, Appli
Sequence 11, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 6, Appli
Sequence 9, Appli
Sequence 9, Appli
Sequence 11, Appli
Sequence 12, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 16, Appli
Sequence 17, Appli
Sequence 18, Appli
Sequence 19, Appli
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311.5	312.5	312.5	312.5	312.5	314.5	319.5	324.5	324.5	325.5	325.5	325.5	325.5	325.5	326.5	345	368.5	370.5	375.5	375.5	375.5	375.5	375.5	375.5	377.5	377.5
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,09		Sequence 6, Appli	•	•	•	Sequence 10, Appl	Sequence 9, Appli	Sequence 9, Appli	٣.	_	8	Sequence 10, Appl	Sequence 8, Appli	7	21	•	ļ,	ۍ ۲	Sequence 5, Appli	Sequence 5, Appli	7,	Sequence 7, Appli	Sequence 7, Appl1	Sequence 3, Appli	Sequence 3, Appli

## ALIGNMENTS

RESULT 1 US-10-072-681-3

GENERAL INFORMATION:

Sequence 3, Application US/10072681 Patent No. US20020137893A1

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; SEQ ID NO 3
; LENGTH: 121
; TYPE: PRT
; ORGANISM: mouse
US-10-072-681-3
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PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 09/363573
PRIOR APPLICATION NUMBER: 09/363573
PRIOR FILING DATE: 1999-07-29
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR FILING DATE: 2000-09-29
                                                                                                                                                             Query Match 100.0%; 9
Best Local Similarity 100.0%; 1
Matches 121; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Beck, Joanne T.
TITLE OF INVENTION: PURIFICATION OF NGF
FILE REFERENCE: GENENT.037C3
CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
CURRENT FILING DATE: 2002-02-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Burton, Louis E. APPLICANT: Schmelzer, Char
                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                      61
61
                                                                             ASNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR 120
ASNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR
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                                                                                                                                                             Score 653; DB 12;
Pred. No. 5.1e-68;
0; Mismatches 0;
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PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION UMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 09/970865
PRIOR FILING DATE: 1997-11-14
PRIOR APPLICATION NUMBER: 09/63573
PRIOR FILING DATE: 1999-07-29
PRIOR APPLICATION NUMBER: 09/675,503
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                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5, Application US/08450842 Patent No. US20020045576A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 109;
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TITLE OF INVENTION: PURIFICATION OF
FILE REFERENCE: GENENT.037C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Burton, Louis E.
APPLICANT: Schmelzer, Char
APPLICANT: Beck, Joanne T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
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SOFTWARE: FastSEQ for
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 121
                                                     COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOCTWARE: patin (Genericch)
CURRENT APPLICATION DATA:
                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
                                                                                                                                                                                                                                                                                                                APPLICANT: GENENTECH, INC.
APPLICANT: ROSSNTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
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CITY: South San Francisco
STATE: California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                             ZIP: 94080
                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                             ADDRESSEE:
                                  APPLICATION NUMBER: US/08/450,842
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Pred. No. 3e-61;
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                                                                                                                                                                                                                                                                                                               APPLICANT: Shimkets, Richard A
APPLICANT: Burgess, Catherine
APPLICANT: Burgess, Catherine
APPLICANT: Spytek, Kimberly
APPLICANT: Tehernev, Vellzar T
TITLE OF INVENTION: NO. US20020036598A1el Po
FILE REFERENCE: 15966-572 CIP1
CURRENT APPLICATION NUMBER: US/09/822,263
CURRENT FILING DATE: 2001-06-15
PRIOR APPLICATION NUMBER: 09/672,665
PRIOR APPLICATION NUMBER: 09/672,665
PRIOR FILING DATE: 2000-09-28
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 107; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 16, Application US/09822263 Patent No. US20020036598A1
                                   SOFTWARE: PatentIn Ver.
SEQ ID NO 16
LENGTH: 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/159,248
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/169,344
PRIOR FILING DATE: 1999-12-06
                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/156,745
PRIOR FILING DATE: 1999-09-30
PRIOR APPLICATION NUMBER: 60/158,942
PRIOR FILING DATE: 1999-10-06
                                                                                                                 PRIOR APPLICATION NUMBER: 60/215,048 PRIOR FILING DATE: 2000-06-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Prayaga, Sudhirdas
                                                                                               NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648482
PRICATION NUMBER: 31-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/426419
EILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 31-JAN PRIOR APPLICATION DATA: APPLICATION NUMBER:
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,700 REFERENCE/DOCKET NUMBER: 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/0: FILING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vernet, Corine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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pred. No. 9.4e-60;
4; Mismatches 8
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GENERAL INFORMATION:

APPLICANT: Hubbell, Jeffrey A.

APPLICANT: Schense, Jason C.

APPLICANT: Saklyama, Shelly E.

TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIB

TITLE OF INVENTION: ENGINEERING: INCORPORATION OF FIB

FILE REFERENCE: 87662-68879

CURRENT APPLICATION NUMBER: US/09/798,338

CURRENT FILING DATE: 2001-03-02

PRIOR APPLICATION NUMBER: 09/141,153

PRIOR FILING DATE: 1998-08-27
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; ORGANISM: Homo sapien
US-10-072-681-1
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US-10-072-681-1
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PRIOR APPLICATION NUMBER: 60/047855
PRIOR EILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 09/363573
PRIOR FILING DATE: 1999-07-29
PRIOR FILING DATE: 1999-07-29
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Best Local Similarity
Matches 107; Conserv
                                                                                                                                                                                                        Sequence 2, Application US/09798338 Patent No. US20010020086A1
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Best Local Similarity
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SOFTWARE: FastSEQ for Windows Version 4.0
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CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
PRIOR APPLICATION NUMBER: 60/030838
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APPLICANT: Beck, Joanne T
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 09/675,503 PRIOR FILING DATE: 2000-09-29
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                                                                                                                                                                                                                                                                                                                   183 PNPVDSGCRGIDSKHWNSYCTTTHTFVKALTMDGKQAAWRFIRIDTACVCVLSRKAVRR 241
                                                                                                                                                                                                                                                                                                                                    62 SNPVESGCRGIDSKHWNSYCTTTHTFVKALTTDEKQAAWRFIRIDTACVCVLSRKATRR 120
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Pred. No. 9.4e-60;
4; Mismatches 8
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Pred. No. 9.4e-60;
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GENERAL INFORMATION:
APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Sakiyama, Shelly E.
APPLICANT: Sakiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
                                                                                                                    Sequence 6, Application US/09798338 Patent No. US20010020086A1
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SOFTWARE: PatentIn Ver.
SEQ ID NO 2
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Best Local
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CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Schense, Jason C.
APPLICANT: Sakiyama, Shelly E.
TITLE OF INVENTION: ENZYME-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
FILE REFERENCE: 87662-68879
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ORGANISM: Artificial Sequence
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OTHER INFORMATION: Description of Artificial Sequence:Artificial
OTHER INFORMATION: Protein Sequence
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ORGANISM: Artificial Sequence
FEATURE:
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Pred. No. 2.1e-59;
4; Mismatches 8
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Pred. No. 2.1e-59;
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REFERENCE: 87662-68879

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; OTHER INFORMATION: Description of Artificial Sequence:Artificial; OTHER INFORMATION: Protein Sequence US-09-798-338-6
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US-09-798-338-8
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US-09-813-398-9
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Best Local S
Matches 106
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APPLICANT: Hubbell, Jeffrey A.
APPLICANT: Schense, Jason C.
APPLICANT: Schense, Shelly E.
TITLE OF INVENTION: ENGINEE-MEDIATED MODIFICATION OF FIBRIN FOR TISSUE
TITLE OF INVENTION: ENGINEERING: INCORPORATION OF PROTEINS
FILE REFERENCE: 87662-68879
                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 8
LENGTH: 167
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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Best Local 9
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                Sequence 9, Application US/09813398 Patent No. US20020169292A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/798,338
CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/141,153
PRIOR FILING DATE: 1998-08-27
NUMBER OF SEQ ID NOS: 9
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                                                                                                                           109 PNPVDSGCRGIDSKHWNSYCTTTHTEVKALTMDGKQAAWRFIRIDTACVCVLSRKAVR
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                                                                                                                                                                                                   INFORMATION
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Pred. No. 2.3e-59;
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PRIOR FILING DATE: 1999-03-19
PRIOR APPLICATION NUMBER: PCT/US98/19772
PRIOR FILING DATE: 1998-09-22
NUMBER OF SEQ ID NOS: 41
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 52,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. US20020045576A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Bruce D. Weintraub
APPLICANT: Mariusz W. Szkudilnski
APPLICANT: Mariusz W. Szkudilnski
APPLICANT: University of Maryland
TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS
FILE REFERENCE: UOFMD.00301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/813,398
CURRENT FILING DATE: 2001-03-20
                                                                                                                                                                                                       FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION NUMBER: 08/030013
APPLICATION NUMBER: 08/030013
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 121
TYPE: PRT
ORGANISM: HOMO SAPIEN
                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NE
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                             APPLICATION NUMBER: FILING DATE: 31-JAN PRIOR APPLICATION DATA:
                                                                                                                                                     FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648482
                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
                                                     FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 DPNPVDSGCRGIDSKHWNSYCTTTHTFVKAMLTDGKQAAWRFIRIDTACVCVLSRKAVRR 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 ASNPVESGCRGIDSKHWNSYCTTTHTFVKALITDEKQAAWRFIRIDTACVCVLSRKATRR 120
                                                                             APPLICATION NUMBER: FILING DATE: 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
                 NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,700
                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94080
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              460 Point San Bruno Blvd
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOVEL NEUROTROPHIC FACTOR: 100
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87.5%;
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                                                                                               07/587707
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   666P2C1D3
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TELEX: 910/371-7168 INFORMATION FOR SEQ ID NO:

TELEFAX: 417, 7168

TELECOMMUNICATION INFORMATION: TELEPHONE: 415/225-8674 TELEFAX: 415/952-9881

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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N.
APPLICANT: Cheung, Ellen N.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1998-07-19
PRIOR FILING DATE: 1996-07-19
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                                                                                                    RESULT 13
US-09-742-600-1
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Sequence 1, Application US/09742600
Patent No. US20020010135A1
GENERAL INFORMATION:
APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/09745032
Patent No. US20010027179A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 12 SOFTWARE: PatentIn Ver. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 120
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LENGTH: 142 amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               102 FIRIDTA--CVCVLSRKATRR 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                  69 CRGIDSKHWNSYCTTTHTFVKALTTD-EKQAAWRFIRIDTACVCVLSRKATR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 LRQYFFETRCKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWR 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
                                                                                                                                                                            68 CRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGR 119
                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
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Similarity 61.7%;
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                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                              58.0%; Score 378.5; DB 10; 58.9%; Pred. No. 1.5e-36; vative 21; Mismatches 24;
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Pred. No. 6.2e-43;
2; Mismatches 20;
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US-08-450-842-4

Sequence 4, Application US/08450842 Patent No. US20020045576A1

RESULT 15

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APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/742,600
CURRENT FILLING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR APPLICATION NUMBER: US/08/684,353
PRIOR FILING DATE: 1996-07-19
PRIOR FILING DATE: 1996-07-19
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US-09-872-090-1
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SEQ ID NO 1
LENGTH: 120
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Best Local Similarity
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SEQ ID NO 1
LENGTH: 120
                                                                                                                                                           Matches
                                                                                                                                                                                               Query Match
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APPLICANT: Cheung, Ellen Ngoi Yin
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: Analogs of NT-3 (As Amended)
                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/872,090
CURRENT FILING DATE: 2001-66-01
PRIOR APPLICATION NUMBER: 09/255,953
PRIOR FILING DATE: 1999-02-23
                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 08/684,353
PRIOR FILING DATE: 1996-07-19
                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE: A-411B
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ORGANISM: Human
                                                                                                                                                                                                                                                                               TYPE: PRT
Local Similarity 58.9 es 66; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68 CRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGR 119
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                                                                             8 HRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG
                                                                                                 9 HMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRASNPVESG
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                                                                                                                                                                         58.08;
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                                                                                                                                                         ; Score 378.5; DB 10; pred. No. 1.5e-36; 21; Mismatches 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21; Mismatches
                                                                                                                                                                                               DB 10;
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Search completed: December 2, Job time: 4.25557 secs
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INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 257 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                  Query Match 58.0%; Score 378.5; DB 8; Length 257; Best Local Similarity 58.9%; Pred. No. 3.8e-36; Matches 66; Conservative 21; Mismatches 24; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
PRIOR APPLICATION NUMBER: 07/648482
FILING DATE: 31-JAN
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587707
FILING DATE: 31-JAN
PRIOR APPLICATION NUMBER: 07/587707
APPLICATION NUMBER: 36,700
REGISTRATION NUMBER: 36,700
REGISTRATION NUMBER: 666P2C:
TELECOMMUNICATION: 15/225-8674
TELECHONE: 415/225-8674
TELECHAN: 415/225-981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/450,842
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STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
CLASSIFICATION: 514
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ZIP: 94080
                                                                                                                                                                              9 HMGEFSVCDSVSVMVGDKTTATDIKGKEVTVLAEVNINNSVFRQYFFETKCRASNPVESG 68
| ||:||||| |:|| ||::| ||::| ||::|
45 HRGEYSVCDSESLMVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
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Result
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
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                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq
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length: 2000000000
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1 PHSDPARRGELSVC
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Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               December 2, 2002, 15:05:37;
         98.9
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97.3
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                                                                                                                                                                                                                                                                                                                                                                                                                                     | SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHSDPARRGELSVCDSISEW......GWRFIRIDTSCVTLTIKRGR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                  Length
         118
119
119
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142
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    AAW48888
AAB29114
AAR29414
AAR76814
AAB35945
AAW25676
AAW71614
AAR11364
AAR71798
AAR71798
                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7; Search time 23.7163 Seconds (without alignments) 668.605 Million cell updates/sec
BDNF, mouse. Mus Portche BDNF matur BDNF amino acid se Human BDNF recombi BNDF. Synthetic. Human BNDF. Homo Human BDNF. Homo
                                                                                                                                                                                                                                              Description
                                                                                                                                                                             Human brain-derive
Brain derived neut
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346.5	347.5	349.5	350.5	358.5	375.5	375.5	375.5	469.5	522.5	542.5	569.5	582.5	590.5	592	595.5	598.5	603.5	603.5	605.5	605.5	606.5	607	610.5	614.5	617.5	617.5	619.5	622.5	622.5	622.5	622.5	622.5	622.5	622.5
54.1	54.3	54.6	54.8	56.0	58.7	58.7	58.7	73.4	81.6	84.8	89.0	91.0	92.3	92.5	93.0	93.5	94.3	94.3	.94.6	94.6	94.8	94.8	95.4	96.0	96.5	96.5	96.8	97.3	97.3	97.3	97.3	97.3	97.3	97.3
120	120	122	122	120	239	237	236	124	124	124	123	119	123	125	123	129	247	247	252	123	247	119	120	119	247	119	246	266	252	249	249	247	247	247
13	13	13	13	13	15	13	15	13	13	13	13	21	13	13	13	13	12	12	16	13	12	16	17	15	22	16	16	22	12	23	12	23	18	16
AAR21867	AAR21863	AAR21852	AAR21865	AAR21869	AAR47097	AAR29491	AAR47098	AAR21853	AAR21854	AAR21855	AAR21859	AAY92007	AAR21858	AAR21856	AAR21857	AAR21861	AAR14031	AAR14779	AAR76816	AAR21860	AAR14780	AAR76815	AAW29391	AAR54085	AAB66930	AAR76813	AAR77418	AAB69000	AAR11363	ABB57117	AAR11365	AAM50846	62	AAR76817
Chimeric neurotrop				c neurot	s mature N	enopus	z				Chimeric neurotrop	œ				Ë	Human BDNF. Homo	Human BDNF. Homo	Porcine prepro-BDN	Chimeric neurotrop				c		ne BDNF		Human brain-derive	ne prepro-E	se ischaemic c	н	_	preprobbne.	Human prepro-BDNF.

## ALIGNMENTS

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RESULT 1
AAW48888
Key
Region
                                                                                                                                                                                                                                                                            AAW48888 standard; Protein; 118 AA.
                  29-MAY-1997;
15-NOV-1996;
                                              14-NOV-1997;
                                                                                                                                                                                           Neurotrophin; brain-derived neurotrophic factor; BDNF; human; purification; hydrophobic interaction chromatography.
                                                                                                                                                                                                                       Human brain-derived neurotrophic factor.
                                                                                                                                                                                                                                       12-OCT-1998 (first entry)
                                                                                                                                                                                                                                                            AAW48888;
(GETH ) GENENTECH INC
                                                               22-MAY-1998
                                                                                                                     Region
                                                                                                                                                                          Homo sapiens.
                                                                                W09821234-A2
                 97US-0047855
96US-0030838
                                             97WO-US21068
                                                                                                                   /note- "conserved Cys-containing region Cys knot motif"
                                                                                                                                              Location/Qualifiers 58..68
                                                                                                 "conserved Cys-containing region involved in Cys knot motif" \ensuremath{\mathsf{Cys}}
                                                                                                                                       involved
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RESULT 2
AAB29114
ID AAB2
XX
AC AAB2
XX
DT 02-F
XX
Neut
KW Neut
KW Menid
XX
Acus
EN Menid
XX
Neut
KW Midd
XX
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Ne
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Beck
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variant(s) - using hydrophobic interaction chromatography,
optionally in combination with high performance cation exchange
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chromatography
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Meniere's syndrome; myringitis; otitis media; acute vestibular neuronitis; herpes zoster oticus; labyrinthitis; middle; labyrinthe tumour; petrositis; otosclerosis; bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                US6121235-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brain derived neutrophic factor
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                                                                                                                                                                                29-DEC-1995;
                                                                                                                                                                                                                                                             29-DEC-1995;
                                                                                                                                                                                                                                                                                                                                               19-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Neutrophin; trkB; trkC; ototoxicity-related balance impairment;
                                                                                          (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
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                                                                                              GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Burton
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                 95US-0581662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E,
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100.0%;
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Pred. No. 5.4e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
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Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Treating ototoxin-induced neuronal-related balance impairment promoting vestibular ganglion neuron survival prior to, upon exposure to an ototoxin, comprises administering a trkB or tr
                                                                                                                                            21-MAY-1991;
12-JUL-1991;
23-JUL-1991;
28-AUG-1991;
20-SEP-1991;
14-NOV-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-618200/59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR29494;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR29494
                                                                                                                                                                                                                                                                                                                                                                                                              BDNF, mouse
             Use of neurotrophin-4 for promoting growth cells - useful in treating neurological, fe
                                                                                                                                                                                                                                                                                                          WO9220365-A
                                                                                                                                                                                                                                                                                                                                                                 brain-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                         22-APR-1993
                                                         WPI; 1992-415468/50.
                                                                                      Hallbook F,
                                                                                                                 (REGE-) REGENERON PHARM INC
                                                                                                                                                                                                                                                 20-MAY-1992;
                                                                                                                                                                                                                                                                              26-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                   Neurotrophin;
immunological disorders and in diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        al Similarity
118; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Column 49-50;
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                                                                                      Ibanez
                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                             91US-0703450.
91US-0729253.
91US-0734422.
91US-0751356.
91US-0762674.
91US-0791924.
                                                                                                                                                                                                                                                                                                                                                                                   NT;
                                                                                                                                                                                                                                                                                                                                                                    neurotrophic
                                                                                                                                                                                                                                                  92WO-US04266
                                                                                                                                                                                                                                                                                                                                                                                   nerve growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein;
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100.0%;
                                                                                       Moliner
                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
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                                                                                                                                                                                                                                                                                                                                                                       factor;
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                                                                                       CF,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Æ
                                                                                         Persson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      633;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No. 5.4e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                  th and survival of nerve fertility and
                                                                                         HB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                         Yancopoulos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       upon or after or trkC agonist
                                                                                            9
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RESULT 4
ADAR768114
ADAR76814
ADAR76
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
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Best Local S
Matches 118
  Query Match
Best Local S
Matches 118
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amino acid identity re
AAR29493-95.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-APR-1991;
30-AUG-1989;
20-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sug
                                                                                                                                         Mature BDNF proteins isolated from pig brain are given in AAR76813-15 They are used to isolate nucleic acids encoding BDNF and to develop antibodies and other prods. useful in the diagnosis and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PLAC )
(REGE-)
                                                                                                                                                                                                                                                                                      New brain derived neurotrophic factor proteins sustain survival of CNS dopaminergic and cholinergic neurons - used in the diagnosis and treatment of neurological disorders, eg. trauma, Alzheimer's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                              WPI; 1995-274920/36
                                                                                                                                                                                                                                                                                                                                                                                                                                        Barde Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-AUG-1989;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               trauma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brain derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Porcine BDNF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR76814;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  scrofa.
                                                                                                                                                                                                                                 2,
  118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MAX PLANCK GES FOERDERUNG REGENERON PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parkinson's
                                                                                                                                                                                                                                 Column 89;
                                                                                                                                                                                                                                                                                                                                                                                                                     Edgar D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119
                                                                                   119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                            disorders.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neurotrophic factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91US-0691612.
89US-0400591.
90US-0570657.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89US-0400591
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mature NT-4 protein (Xenopus) to the mature proteins from mouse revealed 51%, 60% and 58% respectively. See sequences AAR29491 and
                                                                                                                                                                                                                            100pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Leibrock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                   97.3%;
99.2%;
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99.2%;
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Pred. No. 7.8e

O; Mismatches
                                                                                                                                                                                                                               English
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                     .8e-61
                                        DB 16;
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  Indels
                                        Length
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                                          119;
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Gaps
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62

MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR

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Gaps 61

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RESULT 5
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                                                                                     This invention relates to a matrix comprising a substrate capable of CC providing attachment of a heparin binding peptide (HBP), a peptide CC comprising a binding domain which binds heparin with high affinity, CC heparin or heparin-like polymer, and a protein growth factor or peptide CC rangent which has a domain that binds heparin with low affinity. CC Included in the invention is a vascular graft comprising the matrix, CC which is capable of supporting cell adhesion. The matrix is used for CC delivering low heparin binding affinity growth factor proteins or CC peptides in a controlled manner suitable for wound healing. The matrix CC can be used in an article for treating demai wounds, and in an CC implantable sterilized composition capable of supporting cell adhesion. CC The present sequence represents a growth factor protein. The protein is CC used in an example illustrating that non-heparin-binding growth factors can be released in a controlled manner from heparin-based drug delivery cycless based on their low affinity for heparin.
                                Query Match
                                                                                                                                                                                                                                                                                                                                                                            Matrix for controlled release of growth factor for wound healing, has substrate that attaches heparin binding peptide, protein growth factor that bind heparin with low affinity, and heparin or heparin-like
                                                               Sequence
                                                                                                                                                                                                                                                                                                                                  Example 5; Page 21; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200064481-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Heparin binding; vascular graft; matrix; cell adhesion; growth factor; wound healing; dermal wound; wound healing; BDNF.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-024627/03.
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 tch 97.3%;
al Similarity 99.2%;
118; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                               119 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               00800HI-0M66
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence
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 Score 622.5;
Pred. No. 7.8e
0; Mismatches
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/.8e-61;
0;
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                                22;
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13

MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR

119

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RESULT 6
AAW25676
RESULT 7
AAR71614
ID AAR7
XX
AC AAR7
AC AAR7
DT 27-0
XX
DE BNDI
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Best Local S
Matches 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; brain derived neurotrophic neuroplasticity; adult brain; epil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW25676;
                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence represents recombinant human brain derived neurotrophic factor (BDNF) which has been produced in E. coli. BDNF may be used to treat epilepsy in mammals. The BDNF has a protective role in the regulation of neuroplasticity in the adult brain and blocks the development of epileptic seizures. The BDNF is preferably administered in an amount of 0.02-0.25 g/kg/day by intraparenchymal or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (AMGE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-FEB-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human BDNF recombinantly produced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-NOV-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Treatment of epilepsy in a mammal brain-derived neurotrophic factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-JUL-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carnahan JF,
                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                   BNDF.
                                                                              AAR71614;
                                                                                                          AAR71614 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                intraventricular injection.
                                               27-OCT-1995
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                                                                                                                                                                                                         MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
                                                                                                                                                                                                                                                                    HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
                                                                                                                                                                                                                                                    HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP
                                                                                                                                                                                       MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR
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                                                                                                                                                                                                                                                                                                                    118;
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                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 12; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                    Conservative
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PASTEUR LOUIS.
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                                                                                                               Protein;
                                                  entry)
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                                                                                                                                                                                                                                                                                                                                      Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              epileptic seizure.
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                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                 ξ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                factor;
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No. 7.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            administration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coli.
                                                                                                                                                                                                                                                                                                                         1.9e-61;
nes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BDNF;
                                                                                                                                                                                                                                                                                                                                                      DB 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E)
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                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                      Length 120;
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DT 31--
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Best Loc
Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents brain derived neurotrophic factor (BDNF). Tooding sequence was amplified using the primers given in AAQ8596-97 which were also used to link the amplified sequence was to an E.coli with sequence and further E.coli sequences which control gene expression. The recombinant sequences were used to transform E.coli for the large scale production of BDNF. The biological activity of the isolated BDNF was evaluated using dorsal root ganglia of an 8 day
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 7; Page 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            effective production of BDNF by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vector encoding Brain-derived neurotrophic factor - effective production of BDNF by recombinant E. coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1995-100949/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HITA ) HITACHI LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chick embryo.
                                                                                                                                                                                                                                             31-MAY-1991
                                                                                                                                                                                                                                                                            AAR11364;
                                                                                                                                Homo
                                                                                                                                                              neuroblastoma;
                                                                                                                                                                               BDNF;
                                                                                                                                                                                                              Human
                                                                                                                                                                                                                                                                                                              AAR11364 standard;
                                              Peptide
                                                                              Protein
WO9103568-A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKOYFYETKCNP 61
                                                                                                                                                                                                                                                                                                                                                                                           al Similarity
118; Conserv
                                                                                                                                                                              Parkinson's disease;
                                                                                                                                                                                                            prepro-Brain Derived Neurotrophic Factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAQ85998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142 AA;
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                                                                                                                                                                                                                                               (first entry)
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                                                                                                                                                                Parkinson-Plus Syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9pp; Japanese.
                                                                              Location/Qualifiers 129..247
                                  /label=
                                                               /label-
                                                                                                                                                                                                                                                                                                                 Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97.3%;
99.2%;
                                                                mature human
                                pre-pro-sequence
                                                                                                                                                                                   Huntington's
                                                                                                                                                                                                                                                                                                                 247
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                                                                                                                                                                                                                                                                                                                   Ŗ.
                                                                    BDNF
                                                                                                                                                                                   Chorea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                      Alzheimer's Disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     142;
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RESULT 9
AAR37798
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                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A portion of the coding sequence for mature human BDNF was amplified by PCR and the sequence determined. The deduced amino acid sequence for the region of at least amino acids 28 to 111 was identical to that of porcine BDNF. The BDNF can be used to sustain the survival of dopaminergic and cholinergic neurons of the CNS, to suppress the proliferation of astroglial cells, to inhibit the uptake of GABA into neurons and to upregulate the expression of NGF receptor on the cell surface.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brain derived neurotrophic factor and DNA encoding diagnosis and treatment of neurological disorders, Parkinson's disease and retinal degeneration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (PLAC )
                                                                                                                Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hohn
14-NOV-1991;
                   13-NOV-1992;
                                         27-MAY-1993
                                                              WO9310150-A
                                                                                            Protein
                                                                                                                                                Homo sapiens
                                                                                                                                                                     BDNF;
                                                                                                                                                                               Chimeric; human;
                                                                                                                                                                                                    Human BNDF
                                                                                                                                                                                                                         29-SEP-1993
                                                                                                                                                                                                                                              AAR37798;
                                                                                                                                                                                                                                                                 AAR37798 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 25; Page 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hyman C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-AUG-1990;
30-AUG-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                129
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                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity es 118; Conserv
                                                                                                                                                                                                                                                                                                                                                                         2 HSDPARRGELSVCDSISEWVTAAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        also
                                                                                                                                                                                                                                                                                                                                 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALIMDSKKRIGWRFIRIDTSCV-TLTIKRGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1991-102083/14.
                                                                                                                                                                                                                                                                                                                     MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR 247
                                                                                                                                                                                                                                                                                                                                                              HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 188
                                                                                                                                                                    chimera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MAX PLANCK GES WISSENSCH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGENERON PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alderson R,
Lottspeich F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAQ11203,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    247
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90US-0570657
89US-0400591
91US-0792492
                                                                                                                                                                   fusion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90WO-US04915
                     92WO-US09792
                                                                                            /note-
129..2
                                                                                                                 Location/Qualifiers
1..128
                                                                                                                                                                              prepro; NGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ11205-6 and AAQ11604.
                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                 97.3%;
99.2%;
                                                                                                                                                                     mouse;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yancopoulos
Lindsay RM;
                                                                                                    "Prepro region"
                                                                                 "Mature BDNF"
                                                                                                                                                                                                                                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                       Score 622.5; DB 12;
Pred. No. 1.9e-60;
0; Mismatches 0;
                                                                                                                                                                   brain-derived neurotrophic nerve growth factor.
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eg
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                                                                                                                                                                               factor;
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RESULT 10
AAR44917
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Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence represents human brain-derived neurotrophic factor (BDNF). The protein encoded by this sequence promotes the survival of dorsal root ganglions. BDNF is a highly basic protein (isoelectric point, pI 10.1) which has a molecular weight of 12.3 kD. These characteristics are very similar to the nerve growth factor (NGF). The cDNA encoding this protein may be used in the construction of a chimeric nucleic acid molecule to encode a preproNGF/BDNF chimera (see also AAQ42568-69).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (AMGE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                              Claim 1;
                                                 Expression promoter contg. 142 prepn. of diseased model animal
                                                                                                                                                                                                                                                                                                                           AAR44917 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryotic expression of neurotrophins - using prepro region of a different neurotrophin for more efficient post-translational
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gies D,
The sequence factor. This
                                                                                 WPI; 1994-011018/02.
N-PSDB; AAQ54374.
                                                                                                                                    31-MAY-1991;
                                                                                                                                                        01-JUN-1992;
                                                                                                                                                                             03-DEC-1993
                                                                                                                                                                                                  JP05317049-A.
                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                         BDNF; brain derived nerve factor; promotor; expression; vector.
                                                                                                                                                                                                                                                               Human
                                                                                                                                                                                                                                                                                                        AAR44917;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 3; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              processing
                                                                                                               (TAKE ) TAKEDA CHEM
                                                                                                                                                                                                                                                                                    18-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                                                         129
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                                                                                                                                                                                                                                                               BDNF
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REGENERON PHARM INC.
                              Fig
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                             1; 15pp;
(AAQ54374) encodes a human is also transformed into a
                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                    91JP-0129666
                                                                                                                                                        92JP-0140570
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                                                                                                                                                                                                                                                                                                                            Protein;
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                             Japanese
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Pred. No. 1.9e-60;
0; Mismatches 0;
                                                  specified l
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brain deri
bacterium
                                                  bases - is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 14;
derived nerve
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                                                              is used
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nutrient
vector
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RESULT 11
AAR76817
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Best Local
        Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            shown in sequence (AAQ54375). The factor can be used for the preparation of animal models of diseases and their treatment well as establishing a drug screening system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR76817
                                                  An adult human retina cDNA library was screened using a probe based on pig BDNF to obtain a clone, phBDNF-C-1, that encoded prepro-BDNF.
                                                                                                                                                                                                                                                                                                                                            Key
                                                                                                                                                                                                                                                                                                                                                                                                       Human prepro-BDNF
                                                                                                                                                                                                                                                                                       01-AUG-1995
                                                                                                                                                                                                                                                                                                         US5438121-A.
                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                      Brain
                                                                                                                                                                                                                                                                                                                                                                                                                         07-DEC-1995
                                                                                                                New brain derived neurotrophic factor proteins sustain survival of CNS dopaminergic and cholinergic neurons - used in the diagnosis and treatment of neurological disorders, eg. trauma, Alzheimer's disease,
                                                                                                                                                                                                                                            25-APR-1991;
30-AUG-1989;
                                                                                                                                                                                                                                                                      30-AUG-1989;
                                                                                                                                                                                                                                                                                                                                   Active-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129
                                  Sequence
                                                                                       Disclosure; Fig.4B-H; 100pp; English.
                                                                                                                                                                                        Barde Y,
                                                                                                                                                                                                                                    20-AUG-1990;
                                                                                                                                                                                Yancopoulos
                                                                                                                                                                                                          (REGE-)
                                                                                                                                                                                                                 (PLAC )
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Local Similarity
hes 118; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
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DB; AAQ93135.
                                                                                                                                                                                                                                                                                                                                                                                      derived
                                                                                                                                                                                                                                                                                                                                                                             rived neurotrophic factor; BDNF; neuron; Alzheimer's disease; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                  MAX PLANCK GES FOERDERUNG WISSENSCHAFTEN
                                                                                                                                                                                                          REGENERON
                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                        Edgar D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              247 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                    247
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Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                    91US-0691612.
89US-0400591.
90US-0570657.
                                                                                                                                                                                                                                                                       89US-0400591
                                    ₹
                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1..128
/label- Prepro-pept.
                                                                                                                                                                                                          PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                        Leibrock J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97.3%;
99.2%;
         97.38;
99.28;
                                                                                                                                                                                                                                                                                                                           Prepro-peptide
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Pred. No. 1.9e-60;
0
         Score 622.5;
Pred. No. 1.
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 Mismatches
                                                                                                                                                                                        Lottspeich F,
          .9e-60;
                  DB 16;
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MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119

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RESULT 12
AAW26238

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AAW26238
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                                                                                                                                                            Query Match
                                                                                                           Matches 118;
                                                                                                                                         Best
                                                                                                                                                                                                                                                                                     A novel recombinant vector has been developed which comprises a nucleotide sequence encoding a fusion protein. The fusion protein comprises three domains joined together in order, from N-terminus to comprises three domains joined together in order, from N-terminus to comprises in a first domain comprising a protein of interest, a second domain comprising anino acid residues. The present sequence represents human preproBDNF, used in example 6 of the present invention. The recombinant vector is used for the production of authentic recombinant proteins of interest. The method of the invention is useful for the expression of fusion proteins capable of isolation by affinity chromatography in pro- or enkaryotic cells. This method allows for the efficient cleavage and generation of authentic proteins of interest that do not contain extraneous (i.e. non-naturally occurring) interest that do not contain extraneous (i.e. non-naturally occurring)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-JAN-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fusion protein; hydrophilic spacer; recombinant; expression system; carboxypeptidase; preproNGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human preproBDNF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Recombinant protein expression system for fusion protein production - useful for high quantity production of authentic recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proteins
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 6; Page 142-143; 194pp; English.
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                                                                                                                                                                                                               Sequence
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                                                                                                              Conservative
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99.2%;
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                                                                                                              Score 622.5; DB 1
Pred. No. 1.9e-60;
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Matches

118;

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RESULT 13
AAM50846
                                             Query Match
Best Local Similarity
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Disulfide-bond
Disulfide-bond
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Peptide
                                                                  growth factor (BDNF), a neurotrophic factor (NTF) that binds to TrkB receptor tyrosine kinase. The invention concerns Trks and their ligands that modulate cell growth, differentiation and survival. Trk proteins are known to mediate the activities of neurotrophins and are also known proto-oncogenes. Methods are claimed for screening for small molecule NTF mimetics, such as the cyclic peptide given in AAM50844, capable of binding to a Trk protein or of modulating the binding of a neurotrophin to a Trk protein. Also claimed are medicaments comprising a small molecule NTF mimetic and their use in claimed methods for treatment of cancer or a neurodegenerative disease selected from Huntington's disease, Parkinson's disease, Alzheimer's disease and amyotrophic lateral sclerosis.
                                                                                                                                                                                                                                 The present sequence is that of human recombinant brain-derived growth factor (BDNF), a neurotrophic factor (NTF) that binds to
                                                                                                                                                                                                                                                                                                        Screening for a neurotrophic factor mimetic, useful for treating, e.g., cancer and Alzheimer's, comprises combining a candidate mimetic with a fragment of a tyrosine kinase protein \,\cdot\,
                                                                                                                                                                                                                                                                                                                                                                    WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUL-2000; 2000US-215778P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Brain-derived growth factor; BDNF; human; neurotrophic factor; NTF; Huntington's disease; Parkinson's disease; Alzheimer's disease; amyotrophic lateral sclerosis; neurodegenerative disease; cancer; neuroprotective; nootropic; anticonvulsant; antiparkinsonian;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAM50846 standard;
                                          Sequence
                                                                                                                                                                                                                                                                            Disclosure; Fig
                                                                                                                                                                                                                                                                                                                                                                                                 Bates
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cytostatic; therapy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     189 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR 247
                                                                                                                                                                                                                                                                                                                                                                  2002-179638/23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         recombinant brain-derived growth factor.
                                          247
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                                          B
                                                                                                                                                                                                                                                                           6; 107pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66
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19..128
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                                                                                                                                                                                                                                                                            English.
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Score 622.5; DB 23; Pred. No. 1.9e-60;
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                              A portion of the coding sequence for mature rat BDNF was amplified by PCR and the sequence determined. The sequence contains a number of conservative changes from the porcine BDNF gene although the deduced amino acid sequence for the region of at least amino acids 28 to 111 was identical to that of porcine BDNF. The BDNF can be used to sustain the survival of dopaminergic and cholinergic neurons of the CNS, to suppress the proliferation of astroglial cells, to inhibit the uptake of GABA into neurons and to upregulate the expression of NGF receptor on the cell surface.
                                                                                                                                                                         Brain derived neurotrophic factor and DNA encoding diagnosis and treatment of neurological disorders, Parkinson's disease and retinal degeneration
                                                                                                                                                                                                                                                                                            (PLAC )
(REGE-)
 Sequence
                                                                                                                                                   Claim 30; Page 155;
                                                                                                                                                                                                                         WPI; 1991-102083/14.
N-PSDB; AAQ11205.
                                                                                                                                                                                                                                                          Hohn A,
                                                                                                                                                                                                                                                                     Hyman C,
                                                                                                                                                                                                                                                                                                                              20-AUG-1990;
30-AUG-1989;
                                                                                                                                                                                                                                                                                                                                                                29-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                       21-MAR-1991.
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neuroblastoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BDNF; Parkinson's disease; Huntington's Chorea; Alzheimer's Disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rat prepro-Brain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP
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                                                                                                                                                                                                                                                                                            MAX PLANCK GES WISSENSCH REGENERON PHARM INC.
                                                                                                                                                                                                                                                          Lottspeich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                         Alderson R,
                       AAQ11203-4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
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                                                                                                                                                                                                                                                                                                                              90US-0570657.
89US-0400591.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Parkinson-Plus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Derived Neurotrophic Factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein;
                                                                                                                                                  229pp; English
                     AAQ11206 and
                                                                                                                                                                                                                                                            Yancopoulos
Lindsay RM;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Syndrome.
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Query Match Best Local :

Best Local Similarity Matches 118; Conserv

Conservative

97.

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Pred. No. 2e-0; Mismatches Score 622.5;

2e-60;

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Indels

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Gaps

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12;

Length

249;

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RESULT 15
ABB57
XX ABB57
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XX MOUSE
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                                                                                                                                                                                                                                                                                                                                                              The present invention describes a method for examining ischaemic cc conditions, comprising measuring the expression levels of particular cc genes (I) in a test sample or determining the expression profile of a cc gene group in the sample comprising genes selected from (I). The method is useful for examining the ischaemic condition (e.g. compressive ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring ce expression levels of particular genes (AB199202 to AB199912, encoding the protein sequences in ABB57020 to ABB57374) or by determining the cexpression profile of a gene group comprising these genes. The cc expression levels or expression profiles produced by these genes are used as an indicator when screening for ischaemic condition-improving crugs or therapeutics for ischaemic diseases. AB199913 and AB199914 crepresent PCR primers for a mouse ischaemic condition related sequence, which are used in the exemplification of the present invention.
                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Examining the ischemic condition (e.g. occlusive ischemia) by measuring expression levels of particular genes defined in the specification or by determining the expression profile of a gene group comprising these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-MAR-2002 (first entry)
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                                                                                                                                                                                                                                                                                                                  Sequence
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                                                                               2002-034733/04.
                             MGYTKEGCRGIDKRHWNSQCRTTQSYVRALIMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
ABI99369
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                                                                                                                                                                                                                                                                                                                     249
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Db 191 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR 249

Search completed: December 2, 2002, 15:08:39
Job time: 24.7163 secs

Total number of	Searched:	Scoring table:	Sequence:	Title:		Run on:	OM protein - pro	
Total number of hits satisfying chosen parameters: 283224	283224 seqs, 96134422 residues	BLOSUM62 Gapop 10.0 , Gapext 0.5	1 PHSDPARRGELSVCDSISEWGWRFIRIDTSCVTLTIKRGR 119	US-10-072-681-4	(without alignments) 1205.921 Million cell updates/sec	December 2, 2002, 15:05:43 ; Search time 9.48652 Seconds	OM protein – protein search, using sw model	GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.

Database : Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Minimum Maximum

DB DB

seg length: 0 seg length: 2000000000

PIR\_73:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result

Result	Score	Query	Length	BB	IĐ	Description
<b>,</b>	622.5	7 :	247	2 ;	A40304	3 :
N	622.5		249	N	25	brain derived neur
w	622.5	.7	249	N	030	
4	622.5	7.	252	N	A30361	
. U	613.5	95.9	248	N	JC6183	
6	594	٢	114	N	I84765	
7	570.5	.9	269	Ŋ	151708	-derived
· œ	564	æ	114	N	I50606	
	559	7.	114	N	I51599	_
10 .	375.5	. 80	236	2	JH0400	4
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14	344.5	ωį	282	N	A35781	hippogampin-dorino
15	336.5		209	N	B42687	neurotrophin-4 are
16	332.5	2	210	N	A42687	4
17	317	•	229	N	I46614	fa
18	317	49.5	243	N	A26311	growth
) <u>L</u>	313	48.9	125	N	A26312	growth
2 6	311.5		286	۰,	NGHUBM	
2 -	210		303	ب	NGRTBA	growth
2 6	308.5	٠	235	N	S14481	growth
2 6	308.5		245	N	I56570	н,
4 1	308.5	٠	307	<u>_</u>	NGMSMG	nerve growth facto
2 0	306.5		241	N	JL0097	
2 6	301.5	47.1	243	N	I51193	growth
2 ~	300.0	4/.0	117	N	S28161	
2 0	١.	46.6	116	Н	NGNJXI	growth
22	242.5	46.2	116	N	A58566	

A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-65, /M',67-247 <ROS>
R;Shintani, A.; Ono, Y.; Kaisho, Y.; Igarashi, K.
Biochem. Biophys. Res. Commun. 182, 325-332, 1992
A;Title: Characterization of the 5'-flanking region of the human brain-derived neurot
A;Reference number: 138072; MUID:92118032; PMID:1339267

A; Accession: I38072

45	44	43	42	41	40	39	38	37	36	ω 5	34	w	32	3	30
67.5	68	68	8	68	68	68	83	69	69	69	69.5	74	253.5	254	295.5
10.5	10.6	10.6		10.6											46.2
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C87083	A97027	S60428	T34199	S65013	A47389	PSHUAM	S77401	T13331	H75198	T29463	G83591	H82406	I51709	S50855	A59218
7	_			proteir	14-3-3 protein zet	14-3-3 protein zet		_	_	ical		probable lipase VC	nerve growth facto	neurotrophin-6 - s	nerve growth facto

## ALIGNMENTS

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A;Status: translated from GB/EMBL/DUBU
A;Molecule type: mRNA
A;Residues: 1-247 <SHI>
A;Residues: 1-247 <SHI>
A;Cross-references: EMBL;X60201; NID:g3928269; PIDN:CAA42761.1; PID:g496626
A;Cross-references: ato not discuss this mRNA sequence in this reference; ato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;17-128/Domain:
F;129-247/Product
F;121/Binding sit
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N;Alternate names: BDNF protein
C;Species: Mus musculus (house mouse)
C;Date: 31-Dec:1993 #sequence_revision 31-Dec-1993 #text_change 16-Jul-1999
C;Accession: S12555; S51180; S51181
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A; Residues: 112-121 <KO2>
C; Superfamily: nerve grow
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A; Molecule type: protein
A; Residues: 131-135 < KOL>
                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:X55573; NID:g287898; R;Kolbeck, R.; Jungbluth, S.; Barde, Y.A. Eur. J. Bicchem. 225, 995-1003, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-249 <HOF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: Regional distribution of brain-derived neurotrophic factor mRNA in A;Reference number: S12555; MUID:90316101; PMID:2369898 A;Accession: S12555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R; Hofer, M.; Pagliusi, S.R.
EMBO J. 9, 2459-2464, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       brain-derived neurotrophic factor
                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: A; Accession: S51180
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Best Local :
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al Similarity
118; Conserv
                                                                                           HSDPARRGELSVCDSISEWYTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP
                                                                            HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP
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                                                                                                                                                                                                                            growth factor beta chain
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99.2%;
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Pred. No. 1.1e-56;
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_change 16-Jul-1999
C;Date: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_change 16-Jul-1999
C;Accession: B60536; B40304; S24955; I60275; I60545
R;Yancopoulos, G.D.; Maisonpierre, P.C.; Ip, N.Y.; Aldrich, T.H.; Belluscio, R;Yancopoulos, G.D.; Maisonpierre, P.C.; Ip, N.Y.; Aldrich, T.H.; Belluscio, Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990
Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990
A;Title: Neurotrophic factors, their receptors, and the signal transduction A;Reference number: A60536; MUID:92111157; PMID:1966766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Maisonplerre, P.C.; Le Beau, M.M.; Espinosa III, R.; Ip, N.Y.; Belluscio, I Genomics 10, 558-568, 1991
A;Title: Human and rat brain-derived neurotrophic factor and neurotrophin-3: A,Reference number: A40304; MUID:91365361; PMID:1889806
A;Accession: B40304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:X67108; NID:g55820; PIDN:CAA47481.1; PID:g55821 R;Ohara, O.; Gahara, Y.; Teraoka, H.; Kitamura, T. Gene 121, 383-386, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           submitted to the EMBL Data Library, June 1992 A; Reference number: S24955 A; Accession: S24955
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A; Residues: 1-249 <YAN>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:D10938; NID:g220996; PIDN:BAA01732.1; PID:g286257 R;Timmusk, T.; Palm, K.; Metsis, M.; Reintam, T.; Paalme, V.; Saarma, M. Neuron 10, 475-489, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: 160275;
A; Accession: 160275
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A; Residues: 1-249 <MAI>
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A; Reference number: 160545;
A; Accession: 160545
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A; Residues: 1-249 < RES>
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A; Residues: 8-249 <MET>
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C; Superfamily:
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A; Residues: 8-249 < RE2>
                                                                                                                        brain-derived neurotrophic factor precursor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 18-Oct-1989 #sequence_revision 18-Oct-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; translated from GB/EMBL/DDBJ
                                             R; Leibrock, J.; Lottspeich, F.;
Nature 341, 149-152, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references:
A;Title: Molecular cloning and expression of brain-derived neurotrophic factor A;Reference number: A30361; MUID:89384868; PMID:2779653
                                                                                                     C; Accession: A30361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Status: preliminary; translated from GB/EMBL/DDBJ
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                              131 HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 190
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       direct tissue-specific expression MUID:93213504; PMID:8461137
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                                                                                Hohn,
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Pred. No. 1.1
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                                                                                  A.; Hofer, M.; Hengerer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.1e-56;
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                                                                                          Masiakowski,
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C;Accession: 184765
R;Isackson, P.J.; Towner, M.D.; Huntsman, M.M.
FEBS Lett. 285, 260-264, 1991
A;Title: Comparison of mammalian, chicken and Xenopus brain-derived A;Reference number: I50606; MUID:91309745; PMID:1906813
A;Accession: I84765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Experimental source: adrenal glands C; Comment: This factor plays the essential roles in the regulation of neuron dopaminergic, glutamatergic, and cholinergic neurons, and it is effective in C; Superfamily: nerve growth factor beta chain C; Keywords: neurotrophic factor F;1-16/Domain: signal sequence #status predicted <SIG>F:17-248/Product: brain-derived neurotrophic factor #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            brain-derived neurotrophic factor precursor - bovine C;SpecLes: Bos prinigenius taurus (cattle) C;Date: 02-Sep-1997 #sequence_revision 05-Sep-1997 #text_change C;Accession: JC6183 R;Arab, S.F.; Krohn, K.; Lachmund, A.; Unsicker, K.; Suter-Crazz Gene 185_95-98, 1997
A; Molecule type: mRNĀ
A; Residues: 1-114 < ISA>
A; Cross-references: EMBL: X61475; NID: 9288317;
C; Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                              brain-derived neurotrophic factor - rhesus macaque (fragment)
C:Species: Macaca mulatta (rhesus macaque)
C:Date: 04-Sep-1997 #sequence_revision 13-Mar-1998 #text_change 16-Jul-1999
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A; Residues: 1-248 < ARA>
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A;TILle: The gene encoding bovine
A;Reference number: JC6183; MUID:9
A;Accession: JC6183
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C;Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein; growth factor
F;126/Binding site: carbohydrate (Asn) (covalent) #status predicted
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A; Molecule type: mRNA
A; Residues: 1-252 <LEI>
                                                                                      A;Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSDPARRGELSVCDSISEWVTAADKRLAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  116;
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99.2%;
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Pred. No. 1.1e
0; Mismatches
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Pred. No. 9.1e-56;
1; Mismatches 1;
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                   PIDN:CAA43703.1;
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                 PID: g288318
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C;Accession: I50606
R;ISackson, P.J.; Towner, M.D.; Huntsman, M.M.
FEBS Lett. 285, 260-264, 1991
A;Title: Comparison of mammalian, chicken and Xenopus brain-derived A;Reference number: I50606; MUID:91309745; PMID:1906813
A;Accession: I50606
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F;151-269/Product: brain-derived neurotrophic factor #status
F;143/Binding site: carbohydrate (Asn) (covalent) #status pre
F;163-230,208-259,218-261/Disulfide bonds: #status predicted
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C;Species: Xiphophorus maculatus (southern platyfish)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
                                                                    A;Cross-references: EMBL:X61476; NID:g288305; C;Superfamily: nerve growth factor beta chain
                                                                                                                          A;Status: preliminary; translated A;Molecule type: mRNA
                                                                                                                                                                                                                                                                      brain-derived neurotrophic factor - chicken (fragment)
C;Species: Gallus gallus (chicken)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Gotz, R.; Raulf, F.; Schartl, M. J. Neurochem. 59, 432-442, 1992
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C; Species: Xip
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A; Residues: 1-269 <G
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Best Local S
Matches 106
                  Query Match
Best Local
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103; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1-269 <GOT>
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89.1%;
               88.1%;
93.6%;
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pred. No. 2.7e-51;
7; Mismatches 5;
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Score 564; DB 2;
Pred. No. 5.1e-51
3; Mismatches
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Pred. No. 4.1e-54;
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                                                                                        PIDN:CAA43704.1;
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                                   Length 114;
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A;Title: Evolutionary studies of the nerve growth factor family
A;Reference number: JH0400; MUID:9122573; PMID:2025430
A;Reference number: JH0400
A;Accession: JH0400
A;Accession: JH0400
A;Molecule type: DNA
A;Cross-references: GB:230090; NID:945553; PIDN:CAA82906.1; PID
C;Comment: This protein belongs to the nerve growth factor family
C;Comment: This protein belongs to the nerve growth factor family
C;Superfamily: nerve growth factor beta chain
C;Reywords: glycoprotein
C;Reywords: glycoprotein
C;Reywords: glycoprotein
F;11-18/Domain: signal sequence #status predicted <PRO>
F;19-113/Domain: propeptide #status predicted <MAT>
F;114-236/Product: neurotrophin-4 #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: Comparison of mammalian, chicken and Xenopus brain-derived neurotrophic factor A;Reference number: I50606; MUID:91309745; PMID:1906813 A;Accession: I51599
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A;Residues: 1-114 <ISA>
A;Cross-references: EMBL:X61477; NID:g288363; PIDN:CAA43705.1;
C;Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; Isackson, P.J.; Towner, M.D.; Huntsman, M.M. FEBS Lett. 285, 260-264, 1991
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Neuron 6, 845-858, 1991
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F;106/Binding site: carbohydrate
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nilarity 92.7%;
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Pred. No. 1.7e-50;
5; Mismatches 3
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Pred. No. 3.2e-31;
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R;Jones, K.R.; Reichardt, L.F.
Proc. Natl. Acad. Sci. U.S.A. 87, 8060-8064, 1990
A;Title: Molecular cloning of a human gene that is a member A;Reference number: A36208; MUID:91045937; PMID:2236018
A;Accession: A36208
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C;Species: Homo sapiens (man)
C;Date: 03-Apr-1992 #sequence_revision 30-Sep-1993 |
C;Accession: A36208; JH0141; C40304; S10719; C60536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross references: GB:X53655; NID:g287794; PIDN:CAA37703.1; PID:g287795 R;Yancopoulos, G.D.; Maisonpherre, P.C.; Ip, N.Y.; Aldrich, T.H.; Bellus Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990 Biol. Fittle: Neurotrophic factors, their receptors, and the signal transduct. A;Title: Neurotrophic factors, their receptors, and the signal transduct. A;Reference number: A60536; MUID:92111157; PMID:1966766
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A; Residues: 1-257 <ROS>
R; Maisonpierre, P.C.; Le Beau, M.M.; Espinosa III, R.; Ip
Genomics 10, 558-568, 1991
A; Title: Human and rat brain-derived neurotrophic factor
A; Reference number: A40304; MUID:91365361; PMID:1889806
A; Accession: C40304
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-257 <JON>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Kaisho, Y.; Yoshimura, K.; I
FEBS Lett. 266, 187-191, 1990
                                                                                                                                                                                                                                                                                           \bar{r};19-138/Domain: propeptide #status predicted <PRO> \bar{r};139-257/Product: neurotrophin-3 #status predicted <MAT> \bar{r};131/Binding site: carbohydrate (Asn) (covalent) #status
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A; Residues: 1-73,'Q',75-77,'R',79-108,'T',110-257
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A; Residues: 1-257 <KAI>
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A; Residues: 1-257 <MAI>
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F;1-18/Domain: signal sequence #status predicted
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A; Map position: 12pl
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KNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGR 256
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C) Accession.

R:Hohn, A.; Leibrock, J.; Bailey, n., Land, R.; Hohn, A.; Leibrock, J.; Bailey, n., Land, R.; Hohn, A.; Leibrock, J.; Bailey, n., Land, R.; Hohn, A.; Electrication and characterization of a novel A.; Title: Identification and I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:X53257; NID:g53451; PIDN:CAA37348.1; R;Kolbeck, R.; Jungbluth, S.; Barde, Y.A. Eur. J. Blochem. 225, 995-1003, 1994
A;Title: Characterisation of neurotrophin dimers and monomes A;Reference number: S51179; MUID:95045576; PMID:7957235
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C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C;Accession: I50400; S42227
R;Maisonpterre, P.C.; Belluscio, L.; Conover, J.C.; Yancopoulos, G.D.
DNA Seq. 3, 49-54, 1992
A;Title: Gene sequences of chicken BDNF and NT-3.
A;Reference number: I50400; MUID:93091238; PMID:1457809
                                                                                                                                                                                                                                                                                                                    C;Superfamily: nerve growth factor beta chain C;Keywords: glycoprotein C;Keywords: glycoprotein efficience #status predicted <SIG>F;1-18/Domain: signal sequence #status predicted <SIG>F;1-8/Domain: signal sequence #status predicted <SIG>F;1-8/D
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C:Species: Mus musculus (house mouse)
C:Date: 30-Jun-1992 #sequence_revision
C:Accession: S09155; S51179
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                                                                                                                                                                                                                                        F;140-258/Product: F;131/Binding site
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A;Cross-references: EMBL:Z30092; NID:g455531;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-257 <MAI>
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A; Residues: 1-258 <H
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Pred. No. 5.5e-28;
"""" tomatches 29;
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Pred. No. 5.
                                                                      Pred.
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                     ≱d. No. 5.50
Mismatches
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29;
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Dec-1993 #sequence\_revision 31-Dec-1993 #text\_change 16-Jul-1999
C;Accession: B42667; JH0504; JH0505
R;Ip, N.Y; Ibanez, C.F; Nye, S.H; McClain, J.; Jones, P.F.; Gies, D.R.;
Proc. Natl. Acad. Sci. U.S.A. 89, 3060-3064, 1992

neurotrophin-4 precursor - rat

B42687

A; Reference number: A42687; A; Accession: B42687

A; Title: Mammalian neurotrophin-4: structure, A; Reference number: A42687; MUID: 92212967; PM

re, chromosomal localization, PMID:1313578

Gies, D.R.; Belluscio,

tissue distri

A; Molecule type: DNA A; Residues: 1-209 <BER> A; Reference number: JH0503; A; Accession: JH0504 R;Berkemeier, L.R.; Winslow, Neuron 7, 857-866, 1991

A; Title: Neurotrophin-5:

a novel neurotrophic 03; MUID:92075279; PMJ

PMID:1742028

factor that

activates trk and trkB

D. V . ;

Rosenth

A;Residues: 1-209 \.... A;Cross-references: GB:M86742; R: Winslow, J. A; Molecule type: DNA A; Residues: 1-209 <IPA> A; Status: preliminary

NID:g205775; PIDN:AAA41728.1; PID:g205776.W.; Kaplan, D.R.; Nikolics, K.; Goeddel,

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A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 25-282 <MAI>
A; Residues: 25-282 <MAI>
A; Cross-references: GB: M33968; NID: 9205771; PIDN: AAA41727.1; PID: 9205772
A; Cross-refamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Ernfors, P.; Ibanez, C.F.; Ebendal, T.; Olson, L.; Perssor Proc. Natl. Acad. Sci. U.S.A. 87, 5454-5458, 1990
A; Title: Molecular cloning and neurotrophic activities of a A; Reference number: A35781; MUID: 90319130; PMID: 2164684
A; Accession: A35781
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R;Maisompierre, P.C.; Belluscio,
Science 247, 1446-1451, 1990
A;Title: Neurotrophin-3: a neurot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Date: 05-Oct-1990 #sequence_revision 05-Oct-1990 #text_change 16-Jul-1999
C;Accession: A35781; A40094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hippocampus-derived neurotrophic factor precursor N; Alternate names: neurotrophin-3 precursor C; Species: Rattus norvegicus (Norway rat)
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A35781
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A; Residues: 1-282 <ERN>
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Best Local :
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                                                                              169 SHRGEYSVCDSESLWVT--DKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPV
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                    66 KEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWREIRIDTSCV-TLTIKRGR 119
                                                                                                                                                                             Local Similarity
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                                                                                                       6 ARRGELSVCDSISEWYTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYT
KNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGR
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57.4%;
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A; Residues: 1-176, 'p',178-209 <BERI>
A; Cross-references: GB:S69323; NID:9240025; PIDN:AAB20548.1; PID:9240026
C; Comment: This protein is a targed-derived, diffusible neurotrophic factor.
C; Comment: The neurotrophins stimulate autophosphorylation and transduce signals through C; Superfamily: nerve growth factor beta chain
C; Keywords: glycoprotein
C; Keywords: glycoprotein
C; Teypomain: signal sequence #status predicted <SIG>F; 11-20/Domain: propeptide #status predicted <PRO>F; 80-209/Product: neurotrophin-5 #status predicted <NEU>F; 75/Binding site: carbohydrate (Asn) (covalent) #status predicted
Search completed: December 2, Job time: 10.4865 secs
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                                                                                                                                                                                          206 TGR 208
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Maximum Match 100%
Listing first 45 summaries
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Mowla S.J., Farhadi H.F., Pareek
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Eukaryota; Metazoa; Chor
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HSSP; P23560; 1B8M.
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   SEQUENCE
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                                                                                                                                     ProDom; PD002052; NGF; SMART; SM00140; NGF; 1
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SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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R->A: ABOLISHES PROCESSING
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae; Helarctos.
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15-JUL-1998 (Rel. 36, Last
15-JUN-2002 (Rel. 41, Last
Brain-derived neurotrophic
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SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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                                     HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
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MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR
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MEDLINE-90316101; PubMed-2369898;
MEDLINE-90316101; S.R., Hohn A.,
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01-MAY-1991 (Rel.
15-JUN-2002 (Rel.
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SMART; SM00140; NGF; 1.
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the adult mouse brain.";
EMBO J. 9:2459-2464(1990).
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Mammalia; Eutheria;
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SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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ALL LOCATED EITHER IN THE CENTRAL N
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                                                                                                      HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
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MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR
                      MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
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S12555; S12555.
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                                                                                                                                                                   97.3%;
ilarity 99.2%;
Conservative
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Rodentia;
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CLEAVAGE (BY S1
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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Pred. No. 1e-5
0; Mismatches
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Sciurognathi; Muridae;
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SIMILARITY).
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RESULT 5
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01-NOV-1991 (Rel. 20, Last seq
15-JUN-2002 (Rel. 41, Last ann
Brain-derived neurotrophic fac
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MEDLINE-91365361; PubMed-1889806;
MENGARDIETE P.C., 1e Beau M.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Métazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Belluscio L., de la Monte S.M., Squinto S., Furth M.E., Yancopoulos G.D.;
"Human and rat brain-derived neurotrophic factor and neurotrophin-3:
                                                                                                                                                                                                                                                                                                                                                                                        gene. "
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MEDLINE-93213504;
Timmusk T., Palm F
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                                                                                 EMBL;
                                                                                                                    use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
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MEDLINE-91222573; PubMed-2025430
                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 187-229 FROM N.A. STRAIN-Sprague-Dawley; TISSUE-Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-92111157;
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                                                                                                                                                                      the
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[5]
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                         HSSP;
                               L; M61178; AAA63483.1; M61175; AAA16841.1; K67108; CAA47481.1; L; D10938; BAA01732.1; B40304; B40304; B40304; B40536.
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                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          structures, distributions, mics 10:558-568(1991).
                                                                                                                                                                                                                                              CONNECTED TO IT
                                                                                                                                                                                                                                                         ALL LOCATED EITHER IN
                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the Eburopean Bioinformatics Institute. There are no restruction non-profit institutions as long as its content by non-profit institutions as long as its content
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                         P23560; 1B8M.
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            IPR002072;
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Sciurognathi; Muridae;
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Squinto S.,
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Furth
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PYODOM; PD002052; NGF; 1.
SMART; SW00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1
PROSITE; PS50270; NGF_2; 1
PROSITE; PS50270; NGF_2; 1
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DISULFID
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DISULFID
CARBOHYD
SEQUENCE
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P14082;
01-JAN-1990
01-JAN-1990
15-JUN-2002
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SIGNAL
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                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ew the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
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                                                                                                                                                                                                                                                                                                                                    Brain-derived
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MEDLINE-89384868; PubMed-2779653;
                                                                                                                                                                                                                                                                                                 Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                            BDNF
                                                                                                                                                                                                      Nature 341:149-152(1989).
                                                     EMBL; X16713; CAA34685.1;
PIR; A30361; A30361.
                                                                                 entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                         Leibrock J., Lottspeich
Masiakowski P., Thoenen
                          InterPro; IPR002072
Pfam; PF00243; NGF;
                                             HSSP; P23560;
                                                                                                                                                                                                                       ractor.
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TISSUE SPECIFICITY: BRAIN AND CENTRAL NERVO
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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ALL LOCATED EITHER IN THE
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(Rel. 13,
(Rel. 41,
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Cetartiodactyla; Suina; Suidae;
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99.28;
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ophic factor precursor
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CLEAVAGE (BY SIP) (BY SIMILARITY).
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Pred. No. 1e-58;
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brain-derived
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ProDom; SMART; S

NGF;

PRINTS; PR00268; NGF. ProDom; PD002052; NGF; 1.

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SITE
DISULFID
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SITE
DISULFID
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Inoue M., Nakayama C., Noguchi H.;
Submitted (MAR-1998) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL POPULATIONS THAT
ALL LOCATED EITHER IN THE CENTRAL NERVOUS SYSTEM OR DIRECTLY
CONNECTED TO IT (BY SIMILARITY).
-I- SUBCELLULAR LOCATION: Secreted.
-I- SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                         O70183;
30-MAY-2000 (Rel. 39,
30-MAY-2000 (Rel. 39,
15-JUN-2002 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAVPO
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                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                              HSSP; P23560; 188M.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                    EMBL; AB012097; BAA25176.1; HSSP; P23560; 1B8M.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                  PROPEP
                                           SIGNAL
                                                     Growth
                                                                                                                                                                               entities
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                                                   PS00248; NGF_1;
PS50270; NGF_2;
actor; Signal.
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POTENTIAL.

BY SIMILARITY.

BRAIN-DERIVED NEUROTROPHIC FACTOR.

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BY SIMILARITY.
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Hystricognathi; Caviidae;
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Query Match Best Local

Similarity

96.6%; 98.3%;

Score Pred.

No.

2.7e-58;

Length

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CRC64;

(POTENTIAL)

PROPEP
CHAIN
DISULFID
DISULFID
DISULFID
CARBOHYD
SEQUENCE

19 129 141 186 196 121 247

18 128 247 208 237 239 121 27802,

POTENTIAL.

BY SIMILARITY.

BRAIN-DERIVED NEUROT

BY SIMILARITY.

NEUROTROPHIC

FACTOR

Growth

factor;

Signal

NGF\_2; NGF\_1;

PROSITE; PS00248; PROSITE; PS50270; ProDom; PD002052; NGF; SMART; SM00140; NGF; 1.

Pfam; Pruvz+, PRINTS; PR00268; NGF.

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Best Local
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30-MAY-2000 (Rel. :
30-MAY-2000 (Rel. :
16-OCT-2001 (Rel. :
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MEDLINE-20211727;
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Mammalia; I
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SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation buropean Bioinformatics Institute. There are no restrictions on it by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in the long as its content
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Chordata; Craniata; Vertebrata;
Carnivora; Fissipedia; Felidae;
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1; Mismatches 0
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Felis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL POPULATIONS THAT ALL LOCATED EITHER IN THE CENTRAL NERVOUS SYSTEM OR DIRECTLY CONNECTED TO IT (BY SIMILARITY).
-I- SUBCELLULAR LOCATION: Secreted.
-I- SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ursus arctos (Brown bear) (Grizzly bear).
Eukaryota; Metazoa; Chordata; Craniata; Ve:
Mammalia; Eutheria; Carnivora; Fissipedia;
                                                                                                                                                                                                                             Growth
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brain-derived
                                                                                                                                                                                                                                                                                                                             EMBL; AF002239; AAB71652.1; HSSP; P23560; 1B8M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                        PRINTS; PR00268; NGF. ProDom; PD002052; NGF; SMART; SM00140; NGF; 1
                                                                                                                                                                                                                                                                                                       InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                or send an
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                                                                                                                                                                                                                                                 PROSITE: PS50248; NGF_1; PROSITE: PS50270; NGF_2;
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(Rel. 36, Last sequence update)
(Rel. 41, Last annotation update)
ed neurotrophic factor precursor (
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BY SIMILARITY.

BRAIN-DERIYED NEUROTROPHIC FACTOR.

CLEAVAGE (BY SIP) (BY SIMILARITY).

BY SIMILARITY.

BY SIMILARITY.
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No. 2.7e-58;
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ia; Ursidae;
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Ursus.
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BDNF_BO;
Q95106;
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01-NOV-1997
15-JUN-2002
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Mammalia; Eutheria;
Bovidae; Bovinae; Bo
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HSSP; P23560; 188M.
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gene encoding bovine brain-derived neu
185:95-98(1997).
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PS50270; NGF_2;
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152; NGF;
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97.5%;
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annotation update)
factor precursor (BDNF) (Fragment).
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BY SIMILARITY.

BRAIN-DERIVED NEUROTROPHIC FACTOR.

BRAIN-DERIVED NEUROTROPHIC FACTOR.

CLEAVAGE (BY SIP) (BY SIMILARITY).

BY SIMILARITY.

BY SIMILARITY.
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neurotrophic factor (BDN)
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Best Local
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Pfam; PF00243; NGF; 1.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
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01-DEC-1992 (Rel. 24, Last
15-JUN-2002 (Rel. 41, Last
Brain-derived neurotrophic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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"Comparison of mammallan, chicken and Xenopus brain-derived
neurotrophic factor coding sequences.";
FEBS Lett. 285:360-264(1991),
-I- FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL POPULATIONS THAT
ALL LOCATED EITHER IN THE CENTRAL NERVOUS SYSTEM OR DIRECTLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Macaca mulatta (Rhesus macaque)
Eukaryota; Metazoa; Chordata; Cı
Mammalia; Eutheria; Primates; Ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-FEB-1995 (Rel. 31, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation updat
Brain-derived neurotrophic factor (BDNF) (F
                                                  Archosauria;
                                                                            Eukaryota; Metazoa;
                                                                                                Gallus gallus (Chicken).
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                                                  Neognathae;
                                                                       Chordata; Craniata; Vertebrata; Euteleostomi;
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ophic factor precursor (
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Pred. No. 4.5e-56;
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Catarrhini; Cercopithecidae;
                                                  Galliformes; Phasianidae; Phasianinae;
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RESULT 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  member abundantly expressed in Xenopus ovary.";
Neuron 6:845-858(1991).
-i- FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=93091238; PubMed=1457809;
Maisonpierre P., Belluscio L., Conov
"Gene sequences of chicken BDNF and
BDNF_CYPCA
Q90322;
                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M83377; AAC42220.1; -. EMBL; X61476; CAA43704.1; -. HSSP; P23560; 1B8M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-Leghorn; TISSUE-Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [1]
SEQUENCE FROM N.A.
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"Evolutionary studies of the nerve growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEBS Lett.
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"Comparison of mammalian, chicken and Xeno
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285:260-264(1991).
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195
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CLEAVAGE (BY SIP) (BY SIMILARITY).
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N-LINKED (GLCNAC. . .) (POTENTIAL).
MY: CEID93E99FDD3BAO CRC64;
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Pred. No. 1.5e
3; Mismatches
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01-NOV-1997
15-JUL-1998
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Q02193;
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Submitted (JAN-1994) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL POPULATIONS THAT ALL LOCATED EITHER IN THE CENTRAL NERVOUS SYSTEM OR DIRECTLY CONNECTED TO IT (BY SIMILARITY).
-I- SUBCELLULAR LOCATION: Secreted.
-I- SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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01-JUL-1993 (Rel. 26, Last seq
16-OCT-2001 (Rel. 40, Last ann)
Brain-derived neurotrophic fac
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HSSP; P23560; 188M.
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Eukaryota; Metazoa; Actinopterygii; Neo
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                               Eukaryota;
                                                                              Xiphophorus maculatus
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Teleostei;
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Euteleoste1;
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           Euteleostomi;
Neoteleostei;
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SEQUENCE FROM N.A.
MEDLINE-92333301; PubMed-1629719;
Gotz R., Raulf F., Schartl M.;
Gotz R., Raulf F., Schartl M.;
"Brain-derived neurotrophic factor"
"Brain-derived neurotrophic factor"
and function than nerve
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SIGNAL 1
PROPEP 19
CCHAIN 151
DISULFID 208
DISULFID 218
DISULFID 218
CARBOHYD 143
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                                                                              01-MAY-1992 (Rel. 22, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
15-JUL-1998 (Rel. 36, Last annotation update)
Brain-derived neurotrophic factor (BDNF) (Fragment).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eukaryota; Metazoa; Chordata; Craniata; Pipoidea; Xenopodinae; Xenopus.
NCBI_TaxID=8355;
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HSSP; P23560;
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MEDLINE-91309745; PubMed-1906813;
Isackson P.J., Towner M.D., Hunts
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PS50270; NGF_2;
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-I- FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL POPULATIONS THAT
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FEBS Lett. 285:260-264(1991).
[2]
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-i- SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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Q13122 tarsipes ro
Q02795 ornithorhyn
Q02798 petaurus br
Q13104 cercartetus
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## ALIGNMENTS

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"FUNCTIONAL ANNOTATION OF A FULL-LENGTH MOUSE CDNA COLLECTION."; NATURE 409:685-690(2001). EMBL; AK017559; BAB30805.1; HSSP: P33560: 188M	?	Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,	Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch KF.,	Nordone P., Ring B., Ringwald M., Rodriquez I., Sakamoto N.,	os D. Marchionni I. Mashima I. Kazzarolli I. Mombaorto D.	Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,	Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,	riml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,	Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,	Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,	)kazaki Y., Gojobori T., Bono H., Kasukawa T., Saito	Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka	Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,	MEDITURE 21085660. BubMed 11217851.	STRAIN-C578L/6J: TISSUE-EMBRYO:	SEQUENCE FROM N.A.	NCBI TaxID-10090:	Sciurognathi: Muridae	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Mus musculus (Mouse).	,		(TrEMBLrel. 19,	01-JUN-2001 (TrEMBLrel. 17, Last sequence update)	JUN-2001 (TrEMBLrel. 17, Created)	•	YL3 PRELIMINARY: PRT: 153 AA.	

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097759;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Carnivora; Fissipedia; Procyonidae; Ailurus.
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Brain derived neurotrophic f
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PROSITE; PS00248; NGF_1; 1.
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
                                                                                                                                             HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP
                                                                                          HSDPARRGELSVCDSISEWYTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP
                                                                                                                                                                                                                                                                           Pro; IPR002072; NGF. PF00243; NGF; 1.
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  (TrEMBLrel.
(TrEMBLrel.
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Pred. No. 1.
                                                                                                                                                                                     Score 622.5; DB 6 pred. No. 2.4e-62;
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                                             PRT;
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                                                                                                                                                                                                                   FE8C62CF1A6C03EE CRC64;
    sequence up
annotation
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Pfam; pF00243; NGF; 1.
PRINTS; PR00265; NGF; 1.
PRODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS00248; NGF_2; 1.
SEQUENCE 249 AA; 28109 MW; 21CEAE
                                                                                                                                  Matches
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PRODOM; PD002052; NGF: 1.
SMART; SN00140; NGF: 1.
PROSITE; PS00248; NGF-1; 1.
PROSITE; PS50270; NGF-2; 1.
NON_TER 1 1 1.
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Kim S.J., Kim C.S., Cha Y.J.
"Anorexia mouse ORF BDNF.";
Submitted (DEC-2001) to the
EMBL; RF459642; AAL58475.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q918L2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Johnson F., Norstrom E., Soderstrom K.;
"Increased expression of endogenous biotin, but not telencephalic song regions during zebra finch vocal Brain Res. Dev. Brain Res. 120:113-123(2000).
EMBL; AF255389; AAF78050.2; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-OCT-2000 (TrEMBLrel. 15, 01-MAR-2001 (TrEMBLrel. 16, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Crauracu, Coronalididae; Archosauria; Aves; Neognathae; Passeriformes; Estrildidae; Estrildinae; Taeniopygia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Poephila guttata (Zebra finch) (Taeniopygia guttata).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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HSDPARRGELSVCDSTSEWVTAAEKKTAVDMSGATVTVLEKVPVPKGQLKQYFYETKCNP
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nilarity 93.3%;
Conservative
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Rodentia;
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                                                                                                                                  Score 592.5; DB 13
Pred. No. 4.1e-59;
3; Mismatches 4;
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Pred. No. 2.5e-62;
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                                                                                                                                                                                                                                                                           BDB9031515BD369D CRC64;
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Q8QG75;
Q1-JUN-2002 (TrEMBLrel. 21, C1)
Q1-JUN-2002 (TrEMBLrel. 21, Le
Q1-JUN-2002 (TrEMBLrel. 21, Le
Brain derived neurotrophic fao
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Q8QG76;
Q1-JUN-2002 (TrEMBLrel. 21,
Q1-JUN-2002 (TrEMBLrel. 21,
Q1-JUN-2002 (TrEMBLrel. 21,
                                                                                                                        Cao M., Yang Y.H., Zhang Y.Z.;
"Molecular cloning of brain derived neurotrophic fa amphibians and reptiles and its application in the phylogeny and taxonomy.";
Submitted (APR-2002) to the EMBL/GenBank/DDBJ datab EMBL; AF497713; AAM18/14.1;
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Phrynocephalus hongyuanensis.

Eukaryota; Metazoa; Chordata; Cra
Lepidosauria; Squamata; Iguania;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cao M., Yang Y.H., Zhang Y.Z.;

"Molecular cloning of brain derived neurotrophic factor gene amphiblans and reptiles and its application in the research phylogeny and taxonomy.";

Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AF497714; AAM18715.1;

EMBL; AF4977149 AAM18715.1;

CHAIN

128

246

BRAIN DERIVED NEUROTROPHIC FACT
                                                                                                                                                                                                                                                                                                                                                                    Japalura splendida.
Eukaryota; Metazoa; Chordata;
                                                                 SEQUENCE
                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                       NCBI_TaxID-118209;
                                                                                                                                                                                                                                                                                                                                Japalura.
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90.
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Score
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Pred. No. 2.
                                                                                                          BRAIN
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ia; Acrodonta; Agamidae; Agaminae;
                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
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                                                             47B1A03DA838FD78 CRC64;
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                                                                                                                                                                                                                                                                                                                                                Acrodonta; Agamidae; Draconinae;
574.
No.
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.5; DB 1
6.6e-57;
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RESULT 8
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AC 0806
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C Euka
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OC Colu
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Best Local S
Matches 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00268; NGF; 1.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF-1; 1.
PROSITE; PS50270; NGF-2; 1.
SEQUENCE 270 AA; 29482 MW;
SEQUENCE FROM N.A. Cao M., Yang Y.H., Zhang "Molecular cloning of br amphibians and reptiles
                                                                                                      Cyclophiops major.
Eukaryota; Metazoa; Chordata;
Lepidosauria; Squamata; Sclerc
Colubridae; Colubrinae; Cyclop
NCBI_TaxID=192173;
                                                                                                                                                                                                                                                                                                                               Q8QG74
Q8QG74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniforma;
Cyprinidae; Danio.
NCBI_TaxID=7955;
[1]
                                                                                                                                                                                                                                        01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, Brain derived neurotrophic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hashimoto M., Heinrich G.; Submitted (DEC-1995) to the EMBL; U42489; AAD00016.1; HSSP; P23560; 1B8M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-1999 (TrEMBLrel. 10,
01-MAY-1999 (TrEMBLrel. 10,
01-DEC-2001 (TrEMBLrel. 19,
Brain-derived neurotrophic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZFIN; ZDB-GENE-000412-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity es 107; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KGYTKEGCRGIDKRYWNSQCRTTQSYVRALTMDNKKRVGWRFIRIDTSCVCTLTIKRGR
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  Zhang Y.Z
of brain
tiles and
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89.9%;
                                                                                                                               Scleroglossa;
Cyclophiops.
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                                         Y.Z.;
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Pred. No. 1.2e
7; Mismatches
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  application
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annotation update)
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    neurotrophic fa
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                                                                                                                                                      Serpentes; Colubroidea;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .2e-56;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 13;
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    e from
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RESULT
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Matches 105
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Submitted (APR-2002) to the
EMBL; AF497715; AAM18716.1;
CHAIN 128 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

Cao M., Yang Y.H., Zhang Y.Z.;

Cloning and sequence analysis of brain derived neurotrophic (BDNF) gene from Sichuan Newt (Tylototriton tallangensis).";

Ying Yung Yu Huan Ching Sheng Wu Hsueh Pao 8:0-0(2002).

EMBL; AF497712; AAM18078.1; -

EMBL; AF497712; AAM18078.1; -

EMBL; AF497712; AAM18078.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O8QG77 PRELIMINARY; PRT; 247 AA.

O8QG77;
O1-JUN-2002 (TrEMBLrel. 21, Created)
O1-JUN-2002 (TrEMBLrel. 21, Last sequence update)
O1-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Brain derived neurotrophic factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                     Q9TT22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tylototriton taliangensis.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Caudata; Salamandroidea; Salamandridae;
                        SEQUENCE FROM
TISSUE-BLOOD;
                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
Cercopithecinae; Mac
                                                                                                                                                                                                                    01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Brain-derived neurotrophic factor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID-129885;
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    Hashimoto
                                                                                      NCBI_TaxID=9542;
                                                                                                                                                                            Macaca fuscata (Japanese macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                     189
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           106;
                                                                                                                                                                                                                                                                                                                                                                                                                                     MGYMKEGCRGIDKRYWNSQCRTTQSYVRALTYDNKKKVGWRFIRIDTSCVCTLTIKRGR
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                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
      Okuno
                                                                                                              Macaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27773
                                                                                                                                    Chordata;
Primates;
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89.1%;
    Ξ.,
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88.2%;
      Tokuyama
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Pred. No. 1.5e
5; Mismatches
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Pred. No. 2.1e
7; Mismatches
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Catarrhini;
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No. 2.1
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7;
                                                                                                                                    Vertebrata; Eutele
i; Cercopithecidae;
        Y.-X.,
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        Miyashita
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                                                                         Willander K., Carlson B., Hallbook F.
Wholecular phylogeny and evolution of
Monotremes and Marsupials.";
Submitted (MAR-1997) to the EMBL/Geni
EMBL; U93380; AAB58685.1; -.
HSSP; P23560; 1BND.
InterPro; IPR002072; NGF.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF; 1.
PRINTS; PR00268; NGF; 1.
SMART; SW00140; NGF; 1.
SMART; SW00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS00248; NGF_2; 1.
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 1 1 1
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01-JUL-1997
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIINE-99270338; PubMed-10340513;
Okuno H., Tokuyama W., Li Y., Hashimoto T., Miyashita Y.;
Quantitative evaluation of neurotrophin and trk mRNA expression
visual and limbic areas along the occipito-temporo-hippocampal pa
in adult macaque monkeys.";
                                                                                                                                                                                                                                                                                                                                                         002792
002792;
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SEQUENCE
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EMBL; AF208982; AAF24762.1; -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
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                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                     NCBI_TaxID=37699;
                                                                                                                                                                                                                                                                                                            Brain-derived
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 Similarity
83; Conserv
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llarity 100.0%;
Conservative
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  Conservative
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Chordata; Craniat
            70.0%;
97.6%;
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Notoryctemorphia;
                                               MW;
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Last annotation update
factor (Fragment).
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  Pred. No. 3.90
1; Mismatches
                       Score 448;
                                               33754EA015314661 CRC64;
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ches 0;
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Notoryctidae; Notoryctes.
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                         DB 6;
               9e-43;
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RESULT
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AC 0.1
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013114;
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013122;
01-JUL-1997 (TrEMBLrel. 04, Created)
01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Brain-derived neurotrophic factor (Fragment).
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE FROM N.A.
Kullander K., Carlson B., Ha
"Molecular phylogeny and evo
Monotremes and Marsupials.";
                                                                                                                                                                                                                                                                                                                    BDNF
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Metatheria; Peramelemorphia; Peramelidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUL-1997
01-DEC-2001
                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Metatheria; Diprotodontia; Tarsipedidae; TNCBI_TaxID=38632;
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                                                                                                                                                                                                                                                                             Tarsipes rostratus (honey possum).
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(TIEMBLrel. 19, Last annotation
ad neurotrophic factor (Fragment)
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96.5%;
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Pred. No. 8.4e-43;
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SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
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SEQUENCE
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01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-JEC-2001 (TrEMBLrel. 19, Last annotation updat
Brain-derived neurotrophic factor (Fragment).
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Monotremata; Ornithorhynchidae; Ornithorhynchus.
NCBI_TaxID-9258;
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Kullander K., Carlson B., Hallbook F.;

Kullander K., Carlson B., Hallbook F.;

Molecular phylogeny and evolution of the neurotrophins from molecular phylogens.

The Monotromes and Marsuplals.";

Kullander K., Carlson B., Hallbook F.;

Kullander K., Lander B., Hallbook F.;

Kullander K., Lander
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Best Local Similarity 96.5%;
Matches 82; Conservative
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Metatheria; Diprotodontia; Petauridae; Petaurus.
NCBI_TaxID=34899;
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US-08-441-513A-4
US-08-451-947-3
US-09-214-214A-1
US-09-216-236-37
US-08-95-043A-7
US-08-95-043A-7
US-08-96-636-368-7
US-09-636-368-7
US-09-636-368-7
US-09-636-368-10
US-08-96-6-080B-3
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APPLICANT: Louis E. Burton, Charles TITLE OF INVENTION: Purification of

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Schmelzer,

Joanne

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NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:

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LENGTH: 118
TYPE: PRT
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APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
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Patent No. 6121235
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Best Local 9
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CURRENT APPLICATION NUMBER: US/08/581,662
CURRENT FILING DATE: 1995-12-29
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                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 36
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                                                                                                                               ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: TOTCHIA, PhD., Timothy E. REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P1063R2
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/030838
FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/047855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: Amino Acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                       62
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                                              h 98.9%; Sc
Similarity 100.0%; F
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                                                               Score 633;
Pred. No.
                                                   Mismatches
                                                                4.9e-64;
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US-09-363-573-4
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US-09-664-295-3
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                                                                                                                                                                                                                                                                                    Query Match
Best Local Sin
Matches 118;
GENERAL INFORMATION:
APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
                                               Sequence 3, Application US/09664295 Patent No. 6429196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/047
FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
NAME: TOTCH:
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INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
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CITY: South San Francisco
STATE: California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Torchia, PhD., REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
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                                                                                                                                                 Local Similarity
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                                                                                                                                                                                                                   HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 60
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Amino Acid
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                                                                                                                                                                                                                                                                                    98.9%; Score 633; DB 4; llarity 100.0%; Pred. No. 4.9e-64; Conservative 0; Mismatches 0;
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US-09-664-295-3
                                                                                                ; TOPOLOGY:
US-08-440-049-4
                                                                                                                              TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: Amino Acid
Query Match
Best Local Similarity 99.2
Thes 118; Conservative
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Best Local Similarity 100.0%;
                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/440,049
FILING DATE: 12-May-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/253937
FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: TOTCh1a, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 90905C2
TELECOMMUNICATION INFORMATION:
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CURRENT APPLICATION NUMBER: US/09/664,295
CURRENT FILING DATE: 2000-09-18
PRIOR APPLICATION NUMBER: US 08/581,662
PRIOR FILING DATE: 1995-12-29
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TYPE: PRT
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APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: WinPatin (Ger
CURRENT APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                            97.3%;
99.2%;
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                         Score 622.5;
Pred. No. 7.6e
0; Mismatches
                                          6e-63;
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US-08-441-513A-4
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Sequence 4, Application PC/TUS9506918
GENERAL INFORMATION:
APPLICANT: Genentech, Inc.
TITLE OF INVENTION: PANTROPIC NEUROTROPHIC FACTORS
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/08441513A
Patent No. 5981480
                                                                                                                                                                                                                                                                                                                     Query Match 97.3%;
Best Local Similarity 99.2%;
Matches 118; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: Amino Acid
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MEDIUM TYPE: 3.5 inch, 1.44 Mb |
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 08/2539: FILING DATE: 03-7UN-1994
ATTORNEY/AGENT INFORMATION: NAME: TOTChia, PhD., Timoth, REGISTRATION NUMBER: 36,700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: PO
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-6674
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PRIOR APPLICATION DATA:
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NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                     Score 622.5; DB 2
Pred. No. 7.6e-63;
                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                    DB 2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: TOTCHIA, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 905PC
TELECOMMUNICATION INFORMATION:
TELEPAN: 415/25-8674
TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 118;
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                   COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTWARE: PATENTIA PRICATION DATA:
                                                                                                                                                                                                                                    APPLICANT: Nawa, Hiroyuki
TITLE OF INVENTION: METHOD OF TREATING EPILEPSY
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                APPLICANT: Carnahan, Josette F
APPLICANT: Depaulis, Antoine
APPLICANT: Feltz, Paul
APPLICANT: Larmet, Yves
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                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                  STREET: 1840 Dehavilland Drive
CITY: Thousand Oaks
STATE: California
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                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                        ADDRESSEE:
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                                                                                                                                91320-1789
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) Point San Bruno Blvd
 NUMBER:
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99.2%;
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US/08/502,348
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Pred. No. 7.6e-63;
0; Mismatches 0;
                                      Version
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                                               US-08-451-947-3
; Sequence 3, Application
; Patent No. 5702906
; GENERAL INFORMATION:
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                                                                                                               RESULT 11
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                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Pa
SEQ ID NO 8
LENGTH: 120
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APPLICANT: Young, Jo
TITLE OF INVENTION:
FILE REFERENCE: A-41
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
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Matches 118; Conserv
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Best Local S
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CURRENT APPLICATION NUMBER: US/09/214,214A
CURRENT FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: PCT/US97/12609
PRIOR FILING DATE: 1007 0 CT/US97/12609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application US/09214214A Patent No. 6211150
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PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1996-0
NUMBER OF SEQ ID NOS: 12
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APPLICANT:
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STRANDEDNESS: sinc
TOPOLOGY: linear
MOLECULE TYPE: prote
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ORGANISM: Human
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NAME: Mazza, Richard J.
REFERENCE/DOCKET NUMBER:
APPLICANT: GENERITECH, INC. APPLICANT: ROSENTHAL, ARNO TITLE OF INVENTION: NOVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                            62 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
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                                                                                                                                                               MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR
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                                                                              Application US/08451947
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cheung, Ellen N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Boone, Thomas
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linear
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99.2%;
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                                                                                                                                                                                                                                                                                       Score 622.5; DB 4; pred. No. 7.7e-63; 0; Mismatches 0;
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Pred. No. 7.7
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RESULT 12
US-08-424-826A-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/030013
                                                                                                                                           GENERAL INFORMATION:
APPLICANT: ROSentha.
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 247 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 66
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 07/5
FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: Torchia, Timothy E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
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APPLICATION NUMBER:
FILING DATE: 31-JAN
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ADDRESSEE: Genentech,
COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                               129 HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 188
                                                                                                                                                                                                                                                                                                                           189 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 460 Point San Bruno Blvd CITY: South San Francisco STATE: California COUNTRY. Term
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 413/271-7168
                                                                                                                                                                                                                                                                                                                                              62 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: 5.25 inch, 360
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 99.2
les 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE:
                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Torchia, Timothy E.
REGISTRATION NUMBER: 36,700
                                                                                                                                                                                                                                                                                                                                                                                                                                  2 HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
                    94080
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                                                                                                                                                            NOVEL NEUROTROPHIC FACTOR
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Pred. No. 1.9e-62;
0; Mismatches 0;
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US-08-595-043A-77
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                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/595,043A
FILING DATE: 31-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                        sequence 77, Application US/08595043A
Patent No. 5935824
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
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FILING DATE: 31-JAN-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587707
FILING DATE: 25-SEP-1990
ATTORNEY/AGENT INFORMATION:
NAME: TOTCHIA, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REGISTRATION NUMBER: 36,700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                      NAME: CARROLL, PETER G.
                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: MEDLEN & CARROLL
STREET: 220 MONTGOMERY STREET, SUITE 2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 247 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: POTELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: WinPatin (Ge CURRENT APPLICATION DATA:
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NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129 HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 08/24 FILING DATE: 10-May-1994
                                                                                                                                                                                                                                                                                                STREET: 220 MONTGOME CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
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NAME: CARROLL, PETER G. REGISTRATION NUMBER: 32,837 REFERENCE/DOCKET NUMBER: SG
                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQVFYETKCNP 61
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                                                                                                                                                                                                                                                             UNITED STATES OF AMERICA
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   SGAR-00371
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Pred. No. 1.9e-62;
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; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-595-043A-77
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US-08-928-694-3
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INFORMATION FOR SEQ ID NO: 7
SEQUENCE CHARACTERISTICS:
LENGTH: 247 amino acids
TYPE: amino acid
TYPE: amino acid
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Patent No. 6037320
GENERAL INFORMATION:
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               TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 08/451
FILING DATE: 26-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/426
FILING DATE: 19-APR-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inc
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CURRENT APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
                                           NAME: Torchia, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0666P2C1D2C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-8674
                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
07/648482
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 31-JAN PRIOR APPLICATION DATA:
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PRIOR APPLICATION DATA:
08/030013
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PRIOR APPLICATION DATA:
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                                                                                                                                  ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 12-Sep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1991
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Local Similarity 99.2%;
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1 DNA Way
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Pred. No. 1.9e-62;
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; TYPE: Amino Acid
; TOPOLOGY: Linear
US-08-928-694-3
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Best Local Similarity
Matches 118; Conserv
                                                                                                                  Query Match
Best Local Similarity
                                                                                                       Matches 118;
                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 66
TELECOMMUNICATION INFORMATION: 415/266-1994
                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: GENENTECH, INC
APPLICANT: ROSENTHAL, ARNO
                                                                                                                                                                                             SEQUENCE CHARACTERISTICS: LENGTH: 247 amino acid
                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 07/5
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               189
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COMPUTER: IBM PC
OPERATING SYSTEM:
SOFTWARE: patin /
                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: POFILING DATE: 19910924 CLASSIFICATION: 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                     TELEPHONE: 415/20-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                    NAME: Hensley, Max D. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94080
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                                                                                                                    97.3%;
99.2%;
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pred. No. 1.9e-62;
0; Mismatches 0
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Pred. No. 1.9e-62;
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Maximum Match 100%
Listing first 45 summaries
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//cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
//cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
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US-09-848-664-22

US-10-072-681-5

10 US-09-745-030-1

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US-09-745-032-8
US-09-742-600-8
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Sequence 4, Appli
Sequence 8, Appli
Sequence 9, Appli
Sequence 9, Appli
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 10, Appl
Sequence 22, Appl
Sequence 2, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 4, Appli
Sequence 6, Appli
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US-08-450-842-65	US-08-450-842-20	US-08-450-842-69	US-08-450-842-64	US-08-450-842-63	-450-842	US-08-450-842-62	US-08-450-842-61	US-08-450-842-59	US-08-450-842-60	US-08-450-842-2	US-08-450-842-6	US-09-813-398-12	US-08-450-842-22		US-08-450-842-23	-99-	US-09-742-600-5	US-09-745-032-5	US-09-872-090-7	US-09-742-600-7	US-09-745-032-7	US-08-450-842-51	US-08-450-842-47	US-09-872-090-3	US-09-742-600-3
65,	Sequence 20, Appl	69,		63,	, 89	-	61,	Sequence 59, Appl	60,		Sequence 6, Appli	12,	22,		23,	رب د	'n	Sequence 5, Appli	7,		-	Sequence 51, Appl	7,		Sequence 3, Appli

## ALIGNMENTS

RESULT 1 US-10-072-681-4 Sequence 4, Application US/10072681 Patent No. US20020137893A1

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; TYPE: PRT
; ORGANISM: Homo sapien
US-10-072-681-4
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                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
PRIOR APPLICATION NUMBER: 60/030838
PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/047855
PRIOR APPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR PPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 09/363573
PRIOR FILING DATE: 1999-07-29
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR FILING DATE: 2000-09-29
NUMBER OF SEQ ID NOS: 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Burton, Louis E.
APPLICANT: Schmelzer, Charles H.
APPLICANT: Beck, Joanne T.
TITLE OF INVENTION: PURIFICATION OF
FILE REFERENCE: GENENT. 037C3
                                                                                                                                                 Query Match
Best Local Similarity
Matches 119; Conserv
                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID
SOFTWARE: FastSEC
SEQ ID NO 4
                                      61
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                                                                       FastSEQ
                                                                                                                                                   Conservative
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                                                                                                                                                 100.0%; S
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vative 0;
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Pred. No. 5.7e-65;
; Mismatches 0;
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US-09-742-600-8
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Patent No. US20010027179A1
GENERAL INFORMATION:
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Best Local
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                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                             SOFTWARE: 1
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/09742600 Patent No. US20020010135A1
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                                                                                                               Matches
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APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
DEFICE APPLICATION NUMBER: 02/214
                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/742,600
CURRENT FILING DATE: 2000-12-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N
APPLICANT: Hershenson, Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Boone, Thomas C. APPLICANT: Cheung, Ellen N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 09/214,214 PRIOR FILING DATE: 1998-12-23
                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
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                                                                                                                                                                                                                         LENGTH: 12
TYPE: PRT
                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
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                                          HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
                                                         HSDPARRGELSVCDSISEWYTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
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 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
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Pred. No. 5.3e-63;
0; Mismatches 0;
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US-08-450-842-3
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US-09-745-032-9
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INPORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 247 amino acids
TYPE: amino acid
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Sequence 9, Application US/09745032 Patent No. US20010027179A1
                                                                                                                                                                                                                     Matches 118;
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Best Local :
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APPLICATION DATA:
APPLICATION NUMBER: 07/64
FILING DATE: 31-JAN
PRIOR PARTY
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APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
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SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
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MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: GENENTECH, APPLICANT: ROSENTHAL,
                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                         129
                                                                                       189 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALIMDSKKRIGWRFIRIDTSCVCTLTIKRGR 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 460 Point San Bruno Blvd CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Torchia, Timothy E REGISTRATION NUMBER: 36, REFERENCE/DOCKET NUMBER:
                                                                                                           62 MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
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                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                TOPOLOGY:
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)GY: linear
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99.2%;
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                                                                                                                                                                                                                                                    DB 8;
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GENERAL INFORMATION:

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; LENGTH: 120
; TYPE: PRT
; ORGANISM: Human
US-09-742-600-9
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APPLICANT: Hershenson, Susan I.
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CUGRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
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US-09-742-600-9
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APPLICANT: Boone, T)
APPLICANT: Cheung,
APPLICANT: Hershen
APPLICANT: Young,
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Best Local Similarity
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Best Local Similarity
Matches 114; Conserv
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PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/742,600
CURRENT FILING DATE: 2000-12-19
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TYPE: PRT
ORGANISM: Human
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                    62 MGYTKEGCRGIDKRHWNSQCRITQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
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                                                                                              2 HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQVFYETKCNP 61
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                                                                          2 HSDPARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
MGYTDEGCRGIDDRHWNSQCRTTQSYVRALTMDSAKAIGWRFIRIDTSCVCTLTIKRGR 120
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Pred. No. 2.6e-60; 
0; Mismatches 4
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RESULT 7

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; LENGTH: 120
; TYPE: PRT
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SEQ ID NO 10
LENGTH: 120
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Matches 114;
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                                                                                                                                                                          Query Match 93.2%;
Best Local Similarity 95.8%;
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                                                                                                                                                          Matches
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CURRENT FILLING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N.
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
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TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
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                                                                                                                                                                                                                                                         ORGANISM: Human
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                      MGYTKEGCRGIDKRHWNSQCRTTQSYVRALIMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
                                                                             HSDPARRGELSVCDSISEWYTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNP 61
MGYTDEGCRGIDDRHWNSQCRTTQSYVRALTMDSAKRIGWRFIRIDTSCVCTLTIKRGR 120
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Hershenson, Susan I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09742600
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Pred. No. 4.4e-60;
0; Mismatches 4
                                                                                                                                                                          Score 596.5; DB 10; Length 120; Pred. No. 4.4e-60;
                                                                                                                                                          Mismatches
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US-09-848-664-22
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US-09-848-664-22
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PRIOR FILING DATE: 1998-09-22
NUMBER OF SEQ ID NOS: 41
SOFTWARE: FRASTSEQ for Windows Version 4.0
SEQ ID NO 10
LENGTH: 120
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Patent No. US20020169292A1
GENERAL INFORMATION:
APPLICANT: Bruce D. Weintraub
APPLICANT: Mariusz W. Szkudlinski
APPLICANT: University of Maryland
TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS
                                                                                                                                      Best Loc
Matches
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                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 22
LENGTH: 72
                                                                                                                                                                                                                                                                                                 APPLICANT: Hubbell, Jeffrey A.
TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growth
TITLE OF INVENTION: Factors from Heparin Containing Matrices
FILE REFERENCE: ETH 108
CURRENT APPLICATION NUMBER: US/09/848,664
CURRENT FILING DATE: 2001-05-03
PRIOR APPLICATION NUMBER: 09/298,084
PRIOR FILING DATE: 1999-04-22
NUMBER OF SEQ ID NOS: 31
SOFTWARE DESCRIPTION
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CURRENT APPLICATION NUMBER: US/09/813,398
CURRENT FILING DATE: 2001-03-20
PRIOR APPLICATION NUMBER: PCT/US99/05908
PRIOR FILING DATE: 1999-03-19
PRIOR FILING DATE: 1999-03-19
                                                                                                                                                                                                                                        LENGTH: 72
TYPE: PRT
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ORGANISM: HOMO SAPIEN
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 61
                                 62
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                                                                 MGYTKEGCRGID 72
                               MGYTKEGCRGID 73
                                                                                                                                                     Similarity
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S20020146414A1
                                                                                                                                  60.2%; Score 385; DB 10; ilarity 100.0%; Pred. No. 1.3e-36; Conservative 0; Mismatches 0;
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Pred. No. 2.7e-59;
1; Mismatches 6;
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APPLICANT: Cheung, Ellen N.
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US REVISEGO73100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR APPLICATION NUMBER: US/08/684,353
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 120
TYPE: PRT
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; Sequence 5, Application US/10072681

; Patent No. US20020137893A1
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US-09-745-032-1
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; ORGANISM: Human US-09-745-032-1
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PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR FILING DATE: 1997-11-14
PRIOR APPLICATION NUMBER: 09/363573
PRIOR FILING DATE: 1999-07-29
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR APPLICATION NUMBER: 09/675,503
PRIOR FILING DATE: 2000-09-29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Burton, Louis E.
APPLICANT: Schmelzer, Charles H.
APPLICANT: Beck, Joanne T.
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SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/072,681
CURRENT FILING DATE: 2002-02-08
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Boone, Thomas C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapien
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67; Conserva
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55.4%; Pred. No. 5.6e-32;
tive 21; Mismatches 29
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; ORGANISM: Human
US-09-742-600-1
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09872090
Patent No. US20020052488A1
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Best Local Similarity
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               SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS ETLE REFERENCE: A-411A US Revised073100 CURRENT SPLICATION NUMBER: US/09/742,600 CURRENT FILING DATE: 2000-12-19 PRIOR APPLICATION NUMBER: 09/214,214 PRIOR PRIOR DATE: 1998-12-23 PRIOR PRIOR DATE: 1998-12-23 PRIOR ETLING DATE: 1998-07-19
                                SOFTWARE: PatentIn Ver. 2.1
                                                 PRIOR APPLICATION NUMBER: 08/PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 9
                                                                                                    CURRENT APPLICATION NUMBER: US/09/872,090 CURRENT FILING DATE: 2001-06-01 PRIOR APPLICATION NUMBER: 09/255,953 PRIOR FILING DATE: 1999-02-23
                                                                                                                                                                              TITLE OF INVENTION: Analogs of NT-3 (As Amended) FILE REFERENCE: A-411B
                                                                                                                                                                                                                                                APPLICANT: Boone,
APPLICANT: Cheun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Ver. 2.1
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                                                                                                                                                                                                            Cheung, Ellen Ngoi Yin
Hershenson, Susan I.
Young, John D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cheung,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53.8%; Score 344.5; DB 10; ilarity 57.4%; Pred. No. 8.3e-32; Conservative 17; Mismatches 29;
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Pred. No. 8.3e-32;
L7; Mismatches 29;
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; ORGANISM: Homo sapiens US-09-872-090-1
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                       Query Match
Best Local
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Best Local 9
     Matches
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
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APPLICATION NUMBER:
FILING DATE: 31-JAN
                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 257 amino acids
                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 07/587707 FILING DATE: 1991 ATTORNEY/AGENT INFORMATION:
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: 5.25 in
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APPLICANT: ROSENTHAL, ARNO
                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66 KEGCRGIDKRHWNSOCRTTQSYVRALTMDSKKRIGWRFIRIDTSCV-TLTIKRGR 119
                   Local
                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                           NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,700
                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 08/426419 FILING DATE: 19-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
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   l Similarity 57.4 66; Conservative
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                   53.8%;
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57.4%; Pred. No. 8.3e-32;
Live 17; Mismatches 29;
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Score 344.5; DB b;
Pred. No. 2.1e-31;
Pred. No. 2.2e-31;
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Db 144 SHRGEYSVCDSESLWVT--DKSSAIDIRGHOVTVLGEIRTGNSSVKOYFYETRCKEARPV 201

09 66 KECCRGIOKRHWMSCOCKTSOTVRALTMDSKKBIGWRETRIDTSGV-TLTIKRGR 119

111111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 1

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Title:
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8
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*

2: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*

3: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*

4: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*

5: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*

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Gapop 10.0 , Gapext 0.5
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653
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PYAEHKSHRGEYSVCDSESL.....RWIRIDTSCVSALSRKIGRT 120
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                                                                                                                                                                                                                                                                 /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA199.DAT:
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:
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/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:
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esult No.	Score	ママ	Length DB		ID	Description
<b>–</b>	646	98.9	119	19	AAW48889	Human neurotrophin
N	646	98.9	119	21	AAB29113	Human neutrophin-3
ω	646	98.9	281	12	AAR11359	Neurotrophin-3. H
4	646	98.9	281	14	AAR37800	Human NT-3. Homo
თ	641	98.2	119	13	AAR29495	NT-3, mouse. Mus
თ	641	98.2	119	15	AAR54086	Neurotrophin-3. R
7	641	98.2	119	20	AAW81118	Neurotrophin-3 wil
8	641	98.2	119	22	AAG64995	Nerve growth facto
9	641	98.2	119	22	AAB35946	NT-3 amino acid se
10	641	98.2	120	17	AAW29392	Conjugate of neuro

45	44	43	42	41	40	39	38	37	36	35	34	<b>ω</b> 3	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11
602	613	619	619	619	619	629	629	629	629	633	634	634	634	638	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641
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119	120	118	118	117	117	120	120	119	119	119	281	257	136	271	271	258	258	258	258	257	257	257	257	257	257	257	257	240	240	240	136	120	120	120
21	21	22	19	22	19	22	19	22	19	17	14	15	11	12	11	23	22	12	11	23	23	22	20	16	14	13	12	15	14	13	12	22	21	18
AAY92008	AAB29142	AAE05870	AAW52301	AAE05872	AAW52303	AAE05869	AAW52300	AAE05871	AAW52302	AAR90530	AAR37801	AAR63067	AAR06650	AAR11307	AAR06649	ABB57323	AAB66928	AAR11357	AAR06648	AAM50847	AAE20262	AAB66927	AAY06594	AAR85078	AAR43936	AAR26272	AAR14032	AAR56451	AAR43937	AAR26273	AAR11306	AAE05868	AAB10455	AAW10014
Human neurotrophin	N-terminal of neut	Human r-metHuNT-3	Mutant met-huNT-3	Human NT-3(1-117)R	Mutant huNT-3 1-11	Human r-metHuNT-3	Mutant met-huNT-3	Human NT-3(1-119)R	Mutant huNT-3 1-11	Pantropic neurotro		Human NGF-2/NT-3 e	Novel polypeptide	Nerve Growth Facto	Novel polypeptide	Mouse ischaemic co	Rat NF. Rattus sp	Neurotrophin-3. M	Novel polypeptide	Human recombinant	Human neurotrophin		Neurotrophin-3 (NT	troph	Ē	NT-3 in	NGF3	/NT-3	ef H	NGF2/NT-3 in pTB13	Nerve Growth Facto	Human recombinant	_	Human neurotrophin

## ALIGNMENTS

AAW48889;  12-OCT-1998 (first entry)  Human neurotrophin-3.  Neurotrophin-3; NT-3; human; purification; hydrophobic interaction chromatography.  Homo sapiens.  Key	ID AAW48889 star	standard; Protein; 119 AA.
OCT-1998 (fi an neurotroph rotrophin-3; rophobic inte to sapiens. ion ion ion ion MAY-1998. NOV-1997; 9	AAW48889;	
an neurotroph rotrophin-3; rophobic inte to sapiens. ion ion fon MAY-1998. NOV-1997; 9	12-OCT-1998	(first entry)
rotrophin-3; rophobic inte to sapiens. fon fon fon MAY-1998. NOV-1997; 9	Human neurotr	ophin-3.
rotrophin-3; rophobic inte to sapiens. fon fon fon MAY-1998. NOV-1997; 9 NOV-1996; 9	uniilaii Hentoci	Opinia - o .
rophobic inte to sapiens.  ion  ion  ion  ion  ion  NOV-1998.  MAY-1997; 9  MAY-1996; 9	Neurotrophin-	3; NT-3; human; purification;
ion sapiens. ion ion MAY-1998. NOV-1997; MAY-1997; MAY-1996; 9	hydrophobic i	nteraction chromatography.
ion ion 821234-A2. 821234-B2. NAY-1998. NOV-1997; 9 NOV-1997; 9	Homo sapiens.	
10n 10n 821234-A2. 821234-A2. MAY-1998. NOV-1997; 9 NOV-1997; 9	Key	Location/Qualifiers
99 9	Region	=
99 9	Region	108110
97WO-US21 97US-0047 96US-0030		<pre>/note= "conserved Cys-containing region involved</pre>
	WO9821234-A2.	
	22-MAY-1998.	
	14-NOV-1997;	97WO-US21068.
	29-MAY-1997; 15-NOV-1996;	97US-0047855. 96US-0030838.

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RESULT 2
AAB29113
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밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This polypeptide comprises human neurotrophin-3 (NT-3) mature polypeptide. Methods are provided for large-scale purification of neurotrophins, including mature NT-3, suitable for clinical use. A claimed method comprises: (1) separating the neurotrophin from the cither proteins using a hydrophobic interaction chromatography resin (HICR); and optionally (2) separating the neurotrophin from a certifical variant by high performance cation exchange chromatography (1) (HICEC). The processes can also be used for purification of e.g. chuman nerve growth factor (NGF) (see AAW4888), mouse NGF (see AAW48887), brain-derived neurotrophic factor (see AAW48888) and neurotrophin-4/5 (see AAW48890). The processes allow separation of neurotrophins from various undesirable misprocessed, misfolded, csize, glycosylated or charge forms. They allow selective separation from variants and other molecules, and from other college with high pl. The processes are applicable to starting materials from various sources, including fermentation cc broths or lysed bacterial or mammalian cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Sim
Matches 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rsolation of neurotrophin(s) from, e.g. mis-folded or glycosylated
variant(s) - using hydrophobic interaction chromatography,
optionally in combination with high performance cation exchange
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 37-38; 59pp; English.
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                                                                                                                                                                                                                                                                   Neutrophin; trkB; trkC; ototoxicity-related balance impairment; meniere's syndrome; myringitis; otitis media; labyrinthitis; acute vestibular neuronitis; herpes zoster oticus; labyrinthitis; middle; labyrinthe tumour; petrositis; otosclerosis; bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB29113 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                         29-DEC-1995;
                                                                                                               29-DEC-1995;
                                                                                                                                                     19-SEP-2000
                                                                                                                                                                                           US6121235-A
                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                          02-FEB-2001
                                     (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                  Human neutrophin-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
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                                                                           95US-0581662
                                                                                                                 95US-0581662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
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Best Local S
Matches 119
                                                                                                                                                                                                                                            oticus, labyrinthitis, middle or labyrinthe tumours, petrositis otosclerosis. NT-4/5 may also be used to treat diseases induced by gram positive, gram negative and acid-fast bacteria.
                                                                                                                                                                                                                                                                                  The present invention relates to treating ototoxin-induced neuronal-related balance impairment in a mammal by administering a neuronal-related balance impairment in controphin-4/5 (NT-4/5). Ototoxicity-related balance impairments include Meniere's syndrome, myringitis, otilis media, acute vestibular neuronitis, herpes zoste oticus, labyrinthitis, middle or labyrinthe tumours, petrositis and
                                                                                                                                                                                                                                                                                                                                                                                                                                            Treating ototoxin-induced neuronal-related balance impairment and promoting vestibular ganglion neuron survival prior to, upon or a exposure to an ototoxin, comprises administering a trkB or trkC a
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                  present sequence is a protein used in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
     61
                                   62
                                                                  Ц
                                                                                   2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000-618200/59
YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 60
                                                                                                                                   119;
                                                                                                                                                    Similarity
                                                                                                                                                                                                    119 AA;
                                                                                                                                                                                                                                                                                                                                                                                                 Column 47-50; 40pp; English
                                                                                                                                     Conservative
                                                                                                                                                   98.9%;
                                                                                                                                     0
                                                                                                                                   Score 646; DB 21;
Pred. No. 1.3e-60;
0; Mismatches 0;
                                                                                                                                                                       Length 119;
                                                                                                                                       Indels
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                                                                                                                                       0
                                                                                                                                       Gaps
        119
                                       120
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0

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RESULT 3
AAR11359
                                        20-AUG-1990;
30-AUG-1989;
07-MAR-1990;
                                                                                                                                                                                                                                                                                                      neuropathy.
                                                                                                                                                                                                                                                                                                                   NT-3; nerve growth factor; NGF; brain derived neurotrophic factor;
BDNF; Alzheimers disease; Parkinsonism; central nervous system; CN
                                                                                                                                                                                                                                                                                                                                                              Neurotrophin-3.
                                                                                                                                                                                                                                                                                                                                                                                          31-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                     AAR11359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR11359 standard;
                                                                                                   29-AUG-1990;
                                                                                                                              21-MAR-1991
                                                                                                                                                          WO9103569-A
                                                                                                                                                                                                     Protein
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                                                                                                                                                                                                                                                                          Homo sapiens.
(REGE-)
              (PLAC
 MAX PLANCK GES WISSENSCH.
REGENERON PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                          (first
                                         90US-0570189.
89US-0400591.
90US-0490004.
                                                                                                     90WO-US04916
                                                                                                                                                                                                     /label- prepro NT3
163..281
                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein;
                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                         mature NT3
                                                                                                                                                                                                                                                                                                                                                                                                                                                   281
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Hohn A,

Leibrock J,

Maisonpierre

, Sq

Furthme,

Lindsay

Bailey K,

Barde YA, 굧

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RESULT 4
AAR37800
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                                                                                 Gies
                                                                                                                                                                                                                                                                                                                                              Chimeric; human; prepro; NGF; brain-derived neurotrophic factor; rat; BDNF; chimera; fusion; nerve growth factor; peripheral; precursor; central; nervous system; dorsal root ganglion neuron; NT-3; homology;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New neurotrophin-3, neurotrophic factor - related to nerve growth- and brain derived neurotrophic-factor, for diagnosis and treatment of neurological disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 199
N-PSDB;
        Eukaryotic expression of neurotrophins - using different neurotrophin for more efficient post-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NT-3 is a new neurotrophic factor and is a member of the NGF/BDGF gene family. The sequence was deduced from the DNA sequence of a clone isolated from a human placental genomic DNA library using probes prepd. from sequences of NGF and BDGF. The clone contg. the longest insert was designated phihN3(G1).

See also AAR11357 and R111358.
                                                                                                                                                                  13-NOV-1992;
                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                                        neurotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR37800 standard; Protein; 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 26; Fig 11; 149pp; English.
                                                                                                      (AMGE-) AMGEN.
(REGE-) REGENERON PHARM INC
                                                                                                                                         14-NOV-1991;
                                                                                                                                                                                         27-MAY-1993
                                                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                 Human NT-3.
                                                                                                                                                                                                                                                                                                                                                                                                                         29-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                  WO9310150-A.
                                                                                                                                                                                                                                                                            Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR37800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    223
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
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DB; AAQ11147.
                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                Hu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281 AA;
                                                                                ss,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                      nodose ganglion
                                                                                                                                           91US-0792492
                                                                                                                                                                  92WO-US09792
                                                                                                                                                                                                                                                     /note-
163..2
                                                                                                                                                                                                                                                                          Location/Qualifiers 25..162
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                                                                                                                                                                                                                                          note-
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100.0%;
                                                                                                                                                                                                                                                              "Human NT-3 prepro region"
                                                                                                                                                                                                                                       "Human NT-3 mature protein"
                                                                              Squinto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 646; DB 12;
Pred. No. 3.8e-60;
0; Mismatches 0;
                                                                              SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                             Yancopoulos
       using prepro region of post-translational
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 281;
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CC neurotrophin-3 (NT-3) respectively. NT-3 has a similar structure to
CD brain derived neurotrophic factor (BDNF) and nerve growth factor (NGF).
CC A putative signal sequence of 18 amino acids is followed by a prosequence
CC of 121 amino acids. The 6 Cys residues present in NGF and BDNF are
CC conserved in NT-3 and are thought to be involved in the formation of
CC disulphide bridges. A high degree of homology is noted between rat and
CC human NT-3 within the region encoding the mature protein. The amino
CC acid sequences of the mature proteins appear absolutely identical. NT-3
CC is capable of promoting survival and neurite outgrowth of dissociated
CC dorsal root ganglion neurons in culture. NT-3 is observed to promote
CC neurite outgrowth from both nodose ganglion but not sympathetic
CC ganglion, and NGF promoted outgrowth from sympathetic ganglion but
CC not nodose explants. Therefore NT-3 appears to have a broader
CC specificity of action than either BDNF or NGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                 12-JUL-1991;
23-JUL-1991;
28-AUG-1991;
20-SEP-1991;
14-NOV-1991;
                         Use of neurotrophin-4 for promoting growth and surcells - useful in treating neurological, fertility immunological disorders and in diagnosis
 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                        NT-3, mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR29495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR29495 standard;
                                                                                  WPI; 1992-415468/50.
                                                                                                            Hallbook F,
                                                                                                                                       (REGE-)
                                                                                                                                                                                                                                      21-MAY-1991;
                                                                                                                                                                                                                                                                  20-MAY-1992;
                                                                                                                                                                                                                                                                                             26-NOV-1992
                                                                                                                                                                                                                                                                                                                         WO9220365-A.
                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                brain-derived
                                                                                                                                                                                                                                                                                                                                                                                            Neurotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Fig 5; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              223
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119;
                                                                                                                                         REGENERON PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
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Page 106-107 + Fig 4B; 180pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98.9%;
ilarity 100.0%;
Conservative
                                                                                                            Ibanez Moliner
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                             NT; nerve growth factor; NGF; neurotrophic factor; BDNF.
                                                                                                                                                                 91US-0703450.
91US-0729253.
91US-0734422.
91US-0751356.
91US-0762674.
91US-0791924.
                                                                                                                                                                                                                                                                  92WO-US04266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 646; DB 14;
Pred. No. 3.8e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                             Persson
                                                                                                             HB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                         l survival
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 281;
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RESULT 6
AAR54086
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Matches 1
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Best Local
          Query Match
Best Local :
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A comparison of the mature NT-4 protein (Xenopus) to the mature NGF, BDNF, and NT-3 proteins from mouse revealed 51%, 60% and 50 amino acid identity respectively. See sequences AAR29491 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nerve growth factor; NGF; chimeric neurotrophin; neurotrophic factor; brain-derived neurotrophic factor; BDNF; neurotrophin-3; NF-3; TrkA; TrkB; TrC; receptor; neurological disorder; Parkinson disease; Alzheimer disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Neurotrophin-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR54086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR29493-95.
                                                                                  Sequences are provided for rat nerve growth factor (AAR54084), rat brain-derived neurotrophic factor (AAR54085) and rat neurotrophin-3 (AAR54086). Chimeric neurotrophins capable of binding TrkA, TrkB ar TrC are obtained by substituting amino acids 3-9, 28-37, 40-49, 61-66, 81-88, 94-98 or 95-97 of a neurotrophin with corresponding amino acids from NGF, BDNF or NT-3. Recombinant chimeric neurotrophins are used to treat e.g. Alzheimer disease and
                                                                                                                                                                                                                                                                                                                                                                                              09-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR54086 standard;
                                                                                                                                                                                       Disclosure; Page 50; 79pp; English.
                                                                                                                                                                                                                disorders
                                                                                                                                                                                                                            New chimeric neurotrophic factors and DNA - used prods, for use in the treatment and diagnosis of
                                                                                                                                                                                                                                                                  WPI; 1994-200202/24.
                                                                                                                                                                                                                                                                                                                                            20-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                    19-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                       WO9412539-A.
                                               Sequence
                                                                                                                                                                                                                                                                                           Ibanez CFM,
                                                                                                                                                                                                                                                                                                                  (MCIN/) MCINTYRE K R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RPVKNGCRGIDDKHWNSOCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPYKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT
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118;
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           Similarity
                                                                          disease.
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Conservative
                                                                                                                                                                                                                                                                                           Persson
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                                                                                                                                                                                                                                                                                                                                           92US-0979630
                                                                                                                                                                                                                                                                                                                                                                      93WO-US11292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.2%;
99.2%;
           98.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119
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Pred. No. 4.3e-60;
0; Mismatches 1;
0
           Score 641; DB 15;
Pred. No. 4.3e-60;
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Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                              to develop
neurological
                         Length 119;
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Gaps
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2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 61

Matches 118;

Conservative

0;

Indels

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Gaps

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RESULT 7
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                                                                            cc factor (NGF) with substitutions at amino acid positions: 623 and H84, and CC one or both of V18 and V20, so that it acquires the ability to bind trkC. CT he variants can be used to promote development, maintenance and CC regeneration of neurons in vivo or in vitro, so can be used to treat a CC wide range of neural diseases, e.g. Alzheimer's, Parkinson's, CC Huntington's and Meniere's diseases; stroke; amyotrophic lateral CC sclerosis; epilepsy; Down's syndrome; nerve deafness; Bell's palsy, or CC sclerosis; epilepsy; Down's syndrome; nerve deafness; Bell's palsy, or CC sclerosis; epilepsy; Down's syndrome; nerve deafness; Bell's palsy, or CC standards for neurotrophin assays; as additives for nerve cell culture CC endia, and for generation of specific antibodies. By introducing trkC complete the culture controphic factor NT-3 while optionally retaining ability to bind trkA candors B and therefore provide several activities in a single molecule, CC with more predictable pharmacokinetic and other properties than a mixture of agents each with a single activity, and better pan-neurotrophic activity than known compounds.
           Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                           New variants of nerve growth factor able to bind trkC - contai specified mutations and have multiple neurotrophic activities single molecule, used for treating, e.g. peripheral neuropathy
                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neurotrophin
trkA; trkB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Neurotrophin-3
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25-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9849308-AI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nerve growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH ) GENENTECH
                                                    Sequence
                                                                                                                                                                                                                                                                                                                       Neurotrophin-3 was used in the production of new variants
                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 33;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LG, Urfer R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard;
              Similarity
                                                       119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           factor; trkC; neuron; neural disease; animal feed;
assay; nerve cell culture media; neurotrophic factor; NT-3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
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97US-0845541.
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                                                                                                                                                                                                                                                                                                                                                     53pp; English.
              98.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Winslow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           119
Score 641; DB 20;
Pred. No. 4.3e-60;
0; Mismatches 1;
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                              Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                               contain
                                                                                                                                                                                                                                                                                                                s of nerve growth G23 and H84, and
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RESULT 8
AAG64995
AAG64995
AAG64995
AC AAG6
XX AAG6
XX Nerv
KW Nerv
KW Neuv
KW Park
OS Unic
XX US2(
YX US2(
YX
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                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                       rne present invention provides a number of nerve growth factor (NGF) variants with trkC-binding activity and trkC-signal inducing activity. They may also be capable of binding to trkA and trkB. The variants are useful in the treatment of neuronal disorders, including peripheral neuropathy and motor-neurone disorders, such as amyotrophic lateral sclerosis, Bell's palsy, and various conditions involving spinal muscular atrophy, or paralysis. They are also useful for treating other human neurodegenerative disorders, such as Alzhelmer's disease, Parkinson's disease, periphersy, multiple sclerosis, Huntington's disease, Down's Syndrome, nerve deafness, Meniere's disease and other conditions characterized by necrosis or loss of neurones, whether central, peripheral, or motor neurons.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nerve growth factor; NGF; trkC-binding activity; trkA; neuronal disorder; neurotrophin; variant; muteant; muteant amyotrophic lateral sclerosis; paralysis; neurodegener; parkinson's disease; Alzheimer's disease; multiple scl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nerve growth factor variants which have trkC-binding activity and trkC-signal inducing activity, useful for treating a neural disorder a mammal such as peripheral neuropathy (e.g. diabetic peripheral neuropathy) -
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(URFE/) URFER R.
(WINS/) WINSLOW J W.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention relates to a matrix comprising a substrate capable of CC providing attachment of a heparin binding peptide (HBP), a peptide CC comprising a binding domain which binds heparin with high affinity, CC comprising a binding domain which binds heparin with high affinity, CC included in the invention is a vascular graft comprising the matrix, CC which is capable of supporting cell adhesion. The matrix is used for CC delivering low heparin binding affinity growth factor proteins or CC peptides in a controlled manner suitable for wound healing. The matrix CC can be used in an article for treating dermal wounds, and in an CC implantable sterilized composition capable of supporting cell adhesion. The present sequence represents a growth factor protein. The protein is cused in an article for treating that non-heparin-binding growth factors can be released in a controlled manner from heparin-based drug delivery cused in a controlled manner from heparin-based drug delivery cused in a controlled manner from heparin-based drug delivery cused in a controlled manner from heparin-based drug delivery cused in a controlled manner from heparin-based drug delivery cused in their low affinity for heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin-based drug delivery cused in the controlled manner from heparin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB35946 standard;
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wound healing; dermal wound; wound healing; NT-3.
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                                                                                                                                                                                                                                                  and methoxypolyethylene glycol, a water soluble polymer. The modification may be at the N-terminal alpha-amino group of NT-3 or on one or several of the lysine epsilon-amino acid groups of NT-3. These derivatives, and similar derivatives of brain derived growth factor (BDGF) have the same uses as the trophic factors BDNF and NT-3. They are useful for promoting the survival and maintenance of neurons in vitro and in vivo, and for treating neurodegenerative diseases, e.g. Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease, retinal degeneration, peripheral neuropathies or Alzheimer's disease. Use of the derivatives improves migration of BDNF or NT-3 through brain tissue, resulting in easier delivery to targets within the brain.
    AAW10014 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conjugates of brain derived growth factor or neurotrophin-3 with water soluble polymer - having improved migration through brain tissue compared with the free peptide, useful e.g. for promoting survival and maintenance of neurons
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                                                                                             RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT
                                                                                                                     sequence represents a new conjugate of neurotrophin-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
    protein; 120
                                                                                                                                                                                       98.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "alpha amino group of Thr modified
methoxypolyethylene glycol"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "optionally
                                                                                                                                                                                                                                                                                                                                                                                                                                English.
                                                                                                                                                                      Score 641; DB Pred. No. 4.3e 0; Mismatches
                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          with polyethylene glycol
    ₹
                                                                                                                                                                                      641; DB 17;
No. 4.3e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  absent"
                                                                                                                                                                                                   Length 120;
                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                        (NT-3)
                                                                                                                                                                         0
                                                                                                                                                                         Gaps
                                                                                           120
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RESULT 12
AAB10455
ID AAB1(
XX
AC AAB1
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Best Local Sin
Matches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disulfide-bond
Disulfide-bond
Disulfide-bond
Human; R-metHuNT; gastrointestinal hypomotility; constipatrkC neurotrophin-3 receptor; surgery; neuropathy; Parkin multiple sclerosis; irritable bowel syndrome; spinal cord
                                                                                                                                                                                                                                                                                                                                                                           This sequence is human neurotrophin 3 (NT-3). Active NT-3 is produced by the method of the invention, which comprises transforming a prokaryotic host cell with an NT-3 gene to express the NT-3, and then NT-3 produced is refolded correctly in a redox buffer. The active NT-3 produced by the method can be used as a reagent for research on the differentiation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                   Human
                                                                           01-DEC-2000
                                                                                                                           AAB10455
                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Preparation of active correctly folded neurotrophin-3
used in cell differentiation, and protein expression:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP09121886-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 expression; protein induction; enzyme expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NT-3;
                                                                                                                                                                                                                                                                                                                                                                 cells,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 1; 15pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TAKE ) TAKEDA CHEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-AUG-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW10014;
                                                                                                                                                                                          62
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                                                                                                                                                                                                                                                      YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
                                                                                                                                                                                                    RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1997-314237/29.
                                                                                                                                                                                      RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT
                                                                                                                                                                                                                                          YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
                                                   R-metHuNT protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neurotrophin 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neurotrophin-3
                                                                                                                                                                                                                                                                                                                                                                 genetic
                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                          Conservative
                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                          Ä,
                                                                                                                                                                                                                                                                                                                                                                 expression and induction of protein and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95JP-0217032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96JP-0220963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
15..80
58..109
                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IND
                                                                                                                                                                                                                                                                                                    98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              active;
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                                                                                                                           120
                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              refolded; differentiation;
                                                                                                                           AA
                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                        3 641; DB 18;
. No. 4.3e-60;
ismatches 1;
               constipation; diarrhea;
y; Parkinson's disease;
                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 - which
research
                                                                                                                                                                                                                                                                                                                                                                enzyme
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                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        can
                                                                                                                                                                                                                                                                                                                                                                 expression
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                         120
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paraplegia;

quadriplegia;

antidiarrheic;

Homo sapiens

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RESULT 13
AAE05868
ID AAE0
AC AAE0
AC AAE0
XX 4-S
XX 4-S
XX Huma
KW Huma
KW Phar
XX Phar
FH Key
FT Misc
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                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                          cc and diarrhea (respectively), comprising administering agonists and carried agonists of trkC neurotrophin-3 receptor activity. (I) is used to creat patients in an intensive care or coronary care unit for cc treat patients in an intensive care or coronary care unit for cc distributions in an intensive care or coronary care unit for cc distributions in the sacute constipation associated with corthopedic, gynecological, thoracic and/or unological surgery. Cc Alternatively, the constipation may be chronic and associated with cc enteric neuropathy, Parkinson's disease, multiple sclerosis, chronic use cof opiate pain killers, irritable bowel syndrome or constipation in complete pain killers, irritable bowel syndrome or constipation in conspital patients. In particular, the constipation may be associated with cc spinal cord injury, paraplegia or quadriplegia. The products of the crement of the containing a coding sequence in an anticological cortaining a coding sequence for human NT-3 has been inserted. R-methung containing a coding sequence identical to native human NT-3 with the
                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 99.3
Matches 118; Conservative
                                                          Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                         Misc-difference
                                                                              pharmacokinetic
                                                                                                              Human recombinant neurotrophic factor-3 (NT-3), r-metHuNT-3
                                                                                                                                     24-SEP-2001
                                                                                                                                                            AAE05868;
                                                                                                                                                                                 AAE05868
                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                addition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This invention describes novel methods (I) disorders associated with gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Treating constipation and diarrhea using trkC neurotrophin-3 receptor activity -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cedarbraum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (REGE-) REGENERON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-JAN-1999;
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                                                                                                                                                                                                                                                                                            2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                  YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-475953/41
                                                                             isoelectric point; p
okinetic behaviour;
                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                of an amino
                                                                                                                                                                                                                                                                                                                                                                          120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 16; 63pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000WO-US00682
                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0232171
 /note= "This residue is expressed when the protein
produced recombinantly in E. coli bacterial cells;
                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHARM INC
                                                                                        point; pI; neurotrophic factor-3;
                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                      98.2%;
                                                                                                                                                                                                                                                                                                                                                                                               terminal methionine.
                                                                              recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English
                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                             Score 641; DB 21;
Pred. No. 4.3e-60;
0; Mismatches 1
                                                                                                                                                                                ₹
                                                                             protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          agonists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and (II)
                                                                              r-metHuNT-3
                                                                                                                                                                                                                                                                                                                                                 Length 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1.e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antagonists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        constipation
                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                          120
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                                                                                                                                                                                                                                                                                61
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            S
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RESULT 14
AAR11306
ID AAR11
XX AAR11
AC AAR11
XX DT 29-MP
XX Nerve
XX Nerve
XX Nerve
XX Homo
OS Homo
OS Homo
FH Key
FT Pepti
FT Prote
FT Pepti
FT Pepti
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                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 118; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cheung ENY,
                                          Protein
                                                                                                                       nerve growth
                                                                                                                                             Nerve
                                                                                                                                                                                          AAR11306;
                                                                                                                                                                                                               AAR11306
                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-FEB-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US6271364-B1
                      Peptide
                                                                  Peptide
                                                                                                  Homo sapiens
                                                                                                                                                                    29-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                              its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (AMGE-) AMGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-FEB-1999;
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                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                 N
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                                                                                                                                                                                                                                                                                                                                                                                                                              N-terminus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-464215/50
                                                                                                                                             Growth
                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                        120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boone
                                                                                                                       factor;
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The present invention relates to a method for production of a polypeptide analogue of a cattonic polypeptide selected from 4 fully defined polypeptide sequences, where the polypeptide analogue has an isoelectric point which is lower and an in vivo circulating life and/or absorption which is increased relative to those properties in unmodified neurotrophic factor 3 (NT-3). The method is useful for producing certain analogues of NT-3 which have a relatively lower pi, yet retain the structure and biological activity of the protein in its 'native' state, to assess the impact of the pi on the pharmacokinetic behaviour of proteins. The present sequence is human recombinant neurotrophic factor-3 (NT-3), r-methum-3. This sequence is recombinantly produced in E. coli bacterial cells and thus expressing the methionine residue at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 1; 24pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polypeptide analogs of recombinant production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                               Factor-like pro-protein from human glioma cells
                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0255953
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                                                 /label=
18..31
                                                                                                        /label=
18..136
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/label- claimed partial peptide
/note- "12-14 successive amino acids from this
                                                                                                                                                                    Location/Qualifiers
1..17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98.2%;
                                                                                                                                                                                                                                                                                           NGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the neurotrophin method -
                                                                          NGF-like polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hershenson
                                                                                                                                                                                                                                                                                           cell
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Pred. No. 4.3e-60;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                           proliferation; glioma cell.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor (NT-3) and its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
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RESULT 15
AAR26273
ID AR26
XX AAR26
XX AAR26
XX 04-FE
XX NGF2/
XX NGF-2
XX NGF-2
XX NGF-2
XX NGF-2
XX PPET Pepti
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Best Local Sim
Matches 118;
                                                                                                                                                                                                                                                                                                                                                                                                               A human glioma-derived lambda gtll cDNA library was used to infect E. coli y1090 and the colonies transferred to a nylon membrane. The filter was screened with labelled DNA coding for human beta-NGF as a probe. A positive clone was designated "lambda beta-GN1321" and was digested with EcoRI. The insert was cloned in EcoRI-digested pUCl18 to give plasmid pUNK5. The CDNA insert was sequenced and the deduced amino acid sequence was found to have 60 per cent homology to human beta-NGF. The invention relates to an antibody to a peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1991-088264/13.
N-PSDB; AAQ11097.
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25-MAY-1990;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nakahama K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TAKE ) TAKEDA CHEMICAL
         Peptide
                                Key
Peptide
                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                 04-FEB-1993
                                                                                                                                                                                                                                                                                                                                                                                            including at least 8 consecutive amino acids from position 18 to position 135 of this sequence.
                                                                Synthetic
                                                                                      NGF-2; pTB1344; drug; hippocampus;
                                                                                                           NGF2/NT-3 in pTB1339
                                                                                                                                                      AAR26273;
                                                                                                                                                                            AAR26273 standard; Protein;
                                                                                                                                                                                                                                 78
                                                                                                                                                                                                                                                    62
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                                                                                                                                                                                                                                                                                                                              Local Similarity
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                                                                                                                                                                                                                                                                                                                                                               136 AA;
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                                                                                                                                 (first entry)
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90JP-0134058.
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| 127..135
| /label= claimo
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/note= "8-9 successive amino acids from
    peptide are claimed"
                                Location/Qualifiers
           /label= Signal_peptide
19..126
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Pred. No. 5.1e-60;
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                                                                                         cerebellum; nodose ganglion.
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Search completed: December Job time: 24.9156 secs
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                                                                                                                                                                                                                                                    The sequences given in AAR26272-73 are the protein encoded by the sequences of the human nerve growth factor-2 gene (NGF2/NT-3) within the plasmids pTB1339 or pTB1344. (See also AAQ27510-11). NGF2/NT-3 is highly expressed in the human hippocampus and cerebellum. It is expressed more highly in newborn animals than in adults. It acts on expressed more highly in newborn animals than in adults. It acts on nerve cells, such as nodose ganglion derived nerve cells and is thought to play a key role in nervous system development. The NGF2/NT-3 obtained by culturing plasmids pTB1339 or pTB1344 may be used as a reagent for research on the brain and nervous system and may be expected to serve as a therapeutic drug for senile dementia. The plasmid vectors used allow production of NGF2/NT-3 stably and in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                           prodn.\ of\ human\ nerve\ growth\ factor-2 - used in research on brain and nervous system and as drug for senile dementia
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N-PSDB; AAQ27513.
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118; Conserv
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/label= Mature_NGF2/NT-3
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                                                                                                                                                                           98.2%;
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Pred. No. 1e-59;
0; Mismatches
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Perfect score:
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Match
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Gapop 10.0 , Gapext 0.5
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    PYAEHKSHRGEYSVCDSESL.....RWIRIDTSCVSALSRKIGRT 120
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A; Residues: 1-73 A; Residues: 1-73 C; Genetics: A; Gene: GDB: NTF3 A; Cross-referenc A; Map position: C; Superfamily: n C; Keywords: 9lyc	A; Residues: A; Cross ref A; Cross ref R; Yancopoul Cold Spring A; Title: Ne A; Reference A; Accession A; Molecule 1	A;Access A;Molecu A;Resideu A;Cross- R;Kaisho FEBS Let A;Title A;Refere A;Access	A;Title: A;Refere A;Access A;Molecu A;Residu R;Maison Genmics A;Title: A;Refere	RESULT 1 C40304 neurotro N;Altern C;Specie C;Date: C;Access R;Jones, Proc. Na A;Title: A;Refere A;Referes A;Rosess A;Rosess R;Cross- R;Rosent		33 33 33 33 33 33 33 33 33 33 33 33 33
A;Residues: 1-73, Q',75-77,'R',79-108,'T',1 C;Genetics: A;Gene: GDB:NTF3 A;Cross-references: GDB:125917; OMIM:162660 A;Map position: 12p13-12p13 C;Superfamily: nerve growth factor beta cha	A; MOLECULE TYPE: MKNA A; Residues: 1-257 <krid- a60="" a;="" c60536="" cold="" compared="" cross-references:="" dna="" dna<="" f="" g.d.;="" gb:="" harb.="" ma="" molecule="" neurotrophic="" not="" number:="" r;="" reference="" rocession:="" spring="" status:="" symp.="" td="" title:="" type:="" yancopoulos,=""><td>A;Accession: C40304 A;Molecule type: DNA A;Rosidues: 1-257 CMAI&gt; A;Cross-references: GB:M61180 R;Kaisho, Y.; Yoshimura, K.; FEBS Lett. 266, 187-197, 1990 A;Mitle: Cloning and expression; Reference number: S10719; MA;Accession: S10719</td><td>Primary struction and the first perimary struction on: JH0141 on: JH0141 e type: DNA s: 1-257 <ros: 558-568,="" a44<="" and="" larre,="" lo,="" lorre,="" number:="" p.c.;="" rattee="" td="" thuman=""><td>RESULT 1 C40304 C40304 neurotrophin-3 precursor - human neurotrophin-3 precursor - human N;Alternate names: nerve growth factor 2; N C;Species: Homo sapiens (man) C;Date: 03-Apr-1992 #sequence_revision 30-S C;Accession: A36208; JH0141; C40304; S10719 R;Jones, K.R.; Raichardt, L.F. Proc. Natl. Acad. Sci. U.S.A. 87, 8060-8064 A;Title: Molecular cloning of a human gene A;Reference number: A36208; MUID:91045937; A;Accession: A36208 A;Holecule type: DNA A;Rasidues: 1-257 <jon> A;Cross-references: GB:M37763; NID:g189300; A;Cross-references: GB:M37763; NID:g189300; R;Rosenthal, A.; Goeddel, D.V.; Nguyen, T.; Neuron 4, 767-773, 1990</jon></td><td></td><td>295.5 45.3 266 40.7 72 11.0 71.5 10.9 71.5 10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 70.5 10.8 70.5 10.8 70.5 10.8 70.7 10.7</td></ros:></td></krid->	A;Accession: C40304 A;Molecule type: DNA A;Rosidues: 1-257 CMAI> A;Cross-references: GB:M61180 R;Kaisho, Y.; Yoshimura, K.; FEBS Lett. 266, 187-197, 1990 A;Mitle: Cloning and expression; Reference number: S10719; MA;Accession: S10719	Primary struction and the first perimary struction on: JH0141 on: JH0141 e type: DNA s: 1-257 <ros: 558-568,="" a44<="" and="" larre,="" lo,="" lorre,="" number:="" p.c.;="" rattee="" td="" thuman=""><td>RESULT 1 C40304 C40304 neurotrophin-3 precursor - human neurotrophin-3 precursor - human N;Alternate names: nerve growth factor 2; N C;Species: Homo sapiens (man) C;Date: 03-Apr-1992 #sequence_revision 30-S C;Accession: A36208; JH0141; C40304; S10719 R;Jones, K.R.; Raichardt, L.F. Proc. Natl. Acad. Sci. U.S.A. 87, 8060-8064 A;Title: Molecular cloning of a human gene A;Reference number: A36208; MUID:91045937; A;Accession: A36208 A;Holecule type: DNA A;Rasidues: 1-257 <jon> A;Cross-references: GB:M37763; NID:g189300; A;Cross-references: GB:M37763; NID:g189300; R;Rosenthal, A.; Goeddel, D.V.; Nguyen, T.; Neuron 4, 767-773, 1990</jon></td><td></td><td>295.5 45.3 266 40.7 72 11.0 71.5 10.9 71.5 10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 70.5 10.8 70.5 10.8 70.5 10.8 70.7 10.7</td></ros:>	RESULT 1 C40304 C40304 neurotrophin-3 precursor - human neurotrophin-3 precursor - human N;Alternate names: nerve growth factor 2; N C;Species: Homo sapiens (man) C;Date: 03-Apr-1992 #sequence_revision 30-S C;Accession: A36208; JH0141; C40304; S10719 R;Jones, K.R.; Raichardt, L.F. Proc. Natl. Acad. Sci. U.S.A. 87, 8060-8064 A;Title: Molecular cloning of a human gene A;Reference number: A36208; MUID:91045937; A;Accession: A36208 A;Holecule type: DNA A;Rasidues: 1-257 <jon> A;Cross-references: GB:M37763; NID:g189300; A;Cross-references: GB:M37763; NID:g189300; R;Rosenthal, A.; Goeddel, D.V.; Nguyen, T.; Neuron 4, 767-773, 1990</jon>		295.5 45.3 266 40.7 72 11.0 71.5 10.9 71.5 10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 71.10.9 70.5 10.8 70.5 10.8 70.5 10.8 70.7 10.7
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.08,'T',110-257 <yan> M:162660 beta chain</yan>	A; MOLECULE type: mRNA A; Residues: 1-257 < KRAIN A; Cross-references: GB: X53655; NID: g287794; PIDN: CAA37703.1; A; Cross-references: GB: X53655; NID: g287794; PIDN: CAA37703.1; A; Cross-references: GB: X53655; NID: g287794; PIDN: CAA37703.1; Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990 Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990 A; Title: Neurotrophic factors, their receptors, and the sign A; Reference number: A60536; MUID: 92111157; PMID: 1966766 A; Accession: C60536 A; Status: not compared with conceptual translation A; Molecule type: DNA	Ľ L	A;Title: Primary structure and biological activity of a novel A;Reference number: JH0141; MUID:90282727; PMID:2344409 A;Recession: JH0141 A;Molecule type: DNA A;Residues: 1-257 <ros> R;Malsonplerre, P.C.; Le Beau, M.M.; Espinosa III, R.; Ip, N. Genomics 10, 558-568, 1991 A;Title: Human and rat brain-derived neurotrophic factor and A;Reference number: A40304; MUID:91365361; PMID:1889806</ros>	RESULT 1 C40304 C40304 C40304 C40304 C40304 Resultrophin-3 precursor - human C;Species: Homo sapiens (man) C;Bate: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_change 16-Jul-1999 C;Bate: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_change 16-Jul-1999 C;Bate: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_change 16-Jul-1999 C;Accession: A36208; Julia Since S	ALIGNMENTS	151709 850855 850859 9C4023 9C4023 110166 110166 88184
	3.1; PID:g287795 .ch, T.H.; Belluscio, L.; Boul signal transduction pathways	l; PID:g189303 human neurotrophic factor.	ovel human neurotrophic fact  N.Y.; Belluscio, L.; de la  and neurotrophin-3: gene str	Nange 16-Jul-1999  of the nerve growth facto  PID:g189301  A.; Laramee, G.R.; Nikol		nerve growth factor neurotrophin-6 - s protein KOZA2.6 (i transforming growth hypothetical prote acetyl-CoA synthet restriction endonu beta-xylosidase / probable isomerase probable isomerase subtilisin-like pr PMT6 protein - yea phaspholipase C - hypothetical prote hypothetical prote hypothetical prote

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RESULT 3
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A;Title: Characterisation of neurotrophin dimers and monomers. A;Reference number: S51179; MUID:95045576; PMID:7957235
A;Accession: S51179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C:Species: Mus musculus (house mouse)
C:Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text
C:Accession: S09155; S51179
R:Hohn, A.; Leibrock, J.; Bailey, K.; Barde, Y.A.
Mature 344, 339-341, 1990
A:Title: Identification and characterization of a novel A; Title: Identification and characterization of a hovel A; Reference number: S09155; MUID:90190865; PMID:2314473
A; Accession: S09155
                   R;Ernfors, P.; Ibanez, C.F.; Ebendal, T.; Olson, L.; Persson, Proc. Natl. Acad. Sci. U.S.A. 87, 5454-5458, 1990
A;Title: Molecular cloning and neurotrophic activities of a p A;Reference number: A35781; MUID:90319130; PMID:2164684
A;Accession: A35781
                                                                                                                                      hippocampus-derived neurotrophic factor precursor-
N;Alternate names: neurotrophin-3 precursor-
C;Species: Rattus norvegicus (Norway rat)
C;Date: 05-Oct-1990 #sequence_revision 05-Oct-1990 #
C;Accession: A37781; A40094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein
A; Residues: 140-152 < KOL>
C; Superfamily: nerve growth factor beta chain
C; Keywords: glycoprotein
C; Keywords: glycoprotein
F; 1-18/Domain: signal sequence #status predicted
F; 140-258/Product: neurotrophin-3 #status predict
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A; Residues: 1-258 <HOH>
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                                                                                                                                                                                                                                                                                                                                                                  RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT
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duct: neurotrophin-3 #status predicted <MAT>
site: carbohydrate (Asn) (covalent) #status
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    site: carbohydrate (Asn) (covalent) #status
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Pred. No. 2.5e-57;
0; Mismatches 1
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Pred. No. 2.4e-57;
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RESULT A26311

nerve growth factor beta chain precursor - C; Species: Gallus gallus (chicken) C; Date: 05-Oct-1988 #sequence\_revision 05-0

05-Oct-1988

#text\_change

21-Jul-2000

chicken

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A; Nolecule type: DNA
A; Molecule type: DNA
A; Residues: 25-282 <MAI>
A; Residues: 25-282 <MAI>
A; Cross-references: GB: M33968; NID: g205771; PIDN: AAA41727.1;
A; Cross-references: GB: M34968; NID: g205771; PIDN: AAA41727.1;
A; A; Cross-references: GB: M34968; NID: g205771; PIDN: AAA41727.1;
A; Cross-references: GB: M34968; NID: g205771; PIDN: AAA41727.1;
A; Cross-references: GB: M34968; NID: g205771; NID: g205771; NID: g205771; NID: g205771; NID: g205771; NID: g205771; NID: g2057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eur. J. Neurosci. 5, 1-14, 1993
A;Title: Cellular localization of brain-derived
A;Reference number: S42227; MUID:94084226; PMID:
A;Accession: S42227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Seq. 3, 49-54, 1992
A; Title: Gene sequences of chicken BDNF and NT-3
A: Reference number: I50400; MUID:93091238; PMID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neurotrophin-3 precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
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I50400
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R;Maisonpierre, P.C.; Belluscio, L.; Squinto, S.; Ip, N.Y. Science 247, 1446-1451, 1990
A;Title: Neurotrophin-3: a neurotrophic factor related to A;Reference number: A40094; MUID:90208301; PMID:2321006
A;Accession: A40094
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C;Superfamily: nerve growth factor beta chain
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A;Molecule type: mRNA
A;Residues: 32-257 <HAL>
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A; Residues: 1-282 <ER
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A; Accession: I50400
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A; Residues: 1-257 <MAI>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:Z30092; NID:g455531; PIDN:CAA82908.1; PID:g927570
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                                                                                                                                                                                                                                                                                              Matches 117; Conserv
                                                                                                                                                                                                                                                                                                                                                                      Query Match
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                                                                   RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
### RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT
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118; Conserv
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99.2%;
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Pred. No. 4.9e-57;
1; Mismatches 1
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Pred. No. 2.7e-57;
0; Mismatches 1
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nerve growth factor beta chain precursor - African clawed frog c;Species: Kenopus laevis (African clawed frog) C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 16-Jul-1999 C;Accession: S14481

R;Carritero, F: Camploni, M.; Cardinali, B.; Pierandrei-Amaldi, P. submitted to the EMBL Data Library, October 1990

A;Description: Structure and expression of the nerve growth gene in Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Superfamily: nerve growth factor beta chain
C;Keywords: growth factor
F;1-125/Domain: signal sequence #status predicted <SIG>
F;126-243/Product: nerve growth factor beta chain #status predicted
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A;Title: Structure-function studies of nerve growth factor: A;Reference number: S12532; MUID:90228346; PMID:2328722
A;Accession: S12532
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A;Title: Molecular cloning of bovine and chick nerve growth factor (NGF): delineation A;Reference number: A26312; MUID:86300647; PMID:2427334
A;Accession: S00127
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A:Title: Molecular cloning of the avian beta-nerve growth faa;Reference number: A24857; MUID:86248129; PMID:3720959
A;Accession: A24857
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R;Ebendal, T.; Larhammar, D.; Persson, H.
EMBO J. 5, 1483-1487, 1986
                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-235 <CAR>
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A; Residues: 126-243 <IBA>
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R;Meier, R.; Becker-Andre, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 118-243 <WIO>
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A: Residues: 1-243 <EBE>
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A; Residues: 121-243
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                                                                                                                                                                                                                                         Cross-references: EMBL:X55716; NID:g64914; PIDN:CAA39249.1; PID:g64915;
                                                                                                                                                                                                           Superfamily:
                                                                                                                        Query Match
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                                                                                  Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRGIDAKHWNSYCTTTHTFVKALTME-GKQAAWRFIRIDTACVCVLSRKSGR 242
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Pred. No. 3.2e-32;
                                                                                  Score 385; DB 2;
Pred. No. 1.7e-31;
                                      Mismatches
                                                                                                                                                                                                               chain
                                                                                                                Length 235;
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Brachet, P.;
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RESULT
JH0400
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K;LanDib-Mansais, Y.; Mellink, C.; Yerle, M.; Gellin, J. Cytogenet. Cell Genet. 67, 120-125, 1994
A;Title: A new marker (NGFB) on pig chromosome 4, isolated A;Reference number: I46614; MUID:94313891; PMID:8039422
A;Accession: I46614
                                                                                                                                                                                                                                                                 R:Whittemore, S.R.; Friedman, P.L.; Larhammar, D.G.; Per J. Neurosci. Res. 20, 403-410, 1988
A:Title: Rat beta-nerve growth factor sequence and site A:Reference number: I56570; MUID:89037223; PMID:3184206
A:Accession: I56570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Gene: NGFB C;Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nerve growth factor B - pig (fragment)
C;Species: Sus scrofa domestica (domestic
C;Date: 21-Feb-1997 #sequence_revision 21-
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A;Molecule type: DNA
A;Residues: 1-245 <RES>
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C; Species: Rattus norvegicus (Norway rat)
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A; Residues: 1-229 <LAH>
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Best Local
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Best Local
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HRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG
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                                                                                                                             67; Conser
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Pred. No. 3e
                                                                                                                           Score 378.5; DB
Pred. No. 8.3e-31
0; Mismatches 2
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21-Feb-1997 #text_change
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A; Molecule type: DNA
A; Residues: 1-236 < HAL>
A; Residues: 1-236 < HAL>
A; Cross-references: GB: Z30090; NID: g455533; PIDN: CAA82906.1;
C; Comment: This protein belongs to the nerve growth factor factor factor beta chain
C; Superfamily: nerve growth factor beta chain
C; Keywords: glycoprotein
F; 1-18/Domain: signal sequence #status predicted < SIG>
F; 19-113/Domain: propeptide #status predicted < PRO>
F; 114-236/Product: neurotrophin-4 #status predicted < MAT>
F; 106/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             neurotrophin-4 precursor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991
C;Accession: JH0400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Accession: A26312
R;Meler, R.; Becker-Andre, M.; Goetz, R.; Heumann, R.; Shaw, A.; Thoenen, H.
EMBO J. 5, 1489-1493, 1986
A;Title: Molecular cloning of bovine and chick nerve growth factor (NGF): delineation
A;Reference number: A26312; MUID:86300647; PMID:2427334
A;Accession: A26312
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F;20-85,63-113,73-115/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-125 <MEI>
A; Cross-references: GB: M26809; NID: 9163419; PIDN: AAA30666.1;
C; Comment: Nerve growth factor stimulates neurite outgrowth 1
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C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988
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Neuron 6, 845-858, 1991
C; Accession: A01399; R; Ullrich, A.; Gray,
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                                                                             nerve growth factor beta chain precursor -
                                                                                                    NGHUBM
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Best Local S
Matches 67
                ;Species: Homo sapiens (man);Date: 19-reb-1984 #sequence_revision;Accession: A01399; S10253
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                                                                                                                                                                                                                                                                                   HRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKN
                                                                                                                                                                                                                                                              HRGEFSVCDSISVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSG
                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57.9%;
59.6%;
                                                                                                                                                                                                                                                                                                                                                                57.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C.F.; Persson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MUID:91222573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                                                                                               19;
                                                                                                                                                                                                                                                                                                                                                                Score 375.5; DB Pred. No. 8.1e-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred.
                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
    Dull
                                         19-Feb-1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    growth factor PMID:2025430
                                                                                 human (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 236;
                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                               25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #text_change 16-Jul-1999
                                         #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #text_change
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PID:g163420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reveal a novel
                                           18-Jun-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        236
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sympathetic and
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C;Complex: nerve growth factor is composed of two alpha chains, two beta chac; Superfamily: nerve growth factor beta chain C;Superfamily: nerve growth factor; submandibular gland C;Reywords: glycoprotein; growth factor; submandibular gland F;1-160-Domain: signal sequence and propeptide (fragment) #status predicted F;167-284/product: nerve growth factor beta chain #status predicted C;26,114,159,211/Binding site: carbohydrate (Asn) (covalent) #status predicted F;181-246,224-274,234-276/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:X52599; NID:g29476; PIDN:CAA36832.1; PID:g29477 C;Comment: Nerve growth factor is found in submaxillary gland in large quantities nic sensory ganglia in vivo and in vitro and to increase cellular neurotubule leve
                                                                                                                                                       C;Superfamily: nerve growth factor beta chain C;Keywords: glycoprotein; growth factor; hormone F;1-121/Domain: propeptide #status predicted chain #si F;122-241/Product: nerve growth factor beta chain #si F;146-154/Region: receptor binding #status predicted F;146-154/Region: receptor binding #stat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Isolation and sequence of a cDNA clone of beta-nerve A; Reference number: JL0097; MUID:89177243; PMID:2926397 A; Accession: JL0097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Date: 07-Jun-1990 #sequence_revision
C; Accession: JL0097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nerve growth factor beta chain precursor C; Species: Cavia porcellus (guinea pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
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A; Introns: 41/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 46-286 <B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: S10253; MUID:90326556; A; Accession: S10253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Borsani, G.; Pizzuti, A.; Rugarli, E.I.
Nucleic Acids Res. 18, 4020, 1990
A;Title: cDNA sequence of human beta-NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-286 <ULL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: A93305; A; Accession: A01399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Human beta-nerve growth factor gene sequence highly homologous A; Reference number: A93305; MUID:83244969; PMID:6688123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Gene: GDB: NGFB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nic sensory ganglia in vivo and in vitro and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 303, 821-825, 1983
                                                                                                                                                                                                                                                                                                                                                          C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                               A; Gene: Beta-NGF
                                                                                                                                                                                                                                                                                                                                                                                                A; Note: the authors
                                                                                                                                                                                                                                                                                                                                                                                                                        A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R; Schwarz, M.A.; Fisher, D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                               :69,114/Binding
   Matches
                           Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Neurochem. 52, 1203-1209,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            174 HRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSG 233
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67; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                  1-241 <SCH>
                              Similarity
                                                                                                                               site:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GDB:120233;
                                                                                                                                                                                                                                                                                                                                                                                                translated
                                                                                                                                  carbohydrate (Asn) (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.2%;
                           56.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bradshaw, R.A.;
                                                                                                                                                                                                                                                                                                                                                                                                   the
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   20;
Score 371.5;
Pred. No. 4.2e
20; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 373.5;
Pred. No. 3.1
                                                                                                                                                                                                                                                                                                                                                                                                   codon
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-Jun-1990 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                   GCU
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                                     4.2e-30;
                                                                                                                                                                                                                                                                                                                                                                                                       for
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .1e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                    DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                       residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26;
                                                                                                                                                                                                   #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Α.;
                                                                                                                                  #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Silani,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 growth
                                                                                                                                                                                                                                                                                                                                                                                                       Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-Mar-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta chains,
                                                                                                                                                                                                       <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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      Gaps
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A; Molecule type: mRNA
A; Residues: 1-303 < FRAH>
A; Residues: 1-303 < FRAH>
A; Cross-references: GB: M22748; NID: g202514; PIDN: AAA40599.1; PID
A; Note: 1t 1s uncertain whether Met-1 or Met-63 is the initiator
C; Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nerve growth factor beta chain precursor - multimammate rat (Mastomys natalensis) C;Speckes: Mastomys natalensis C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 18-Jun-1999 C;Accession: JT0343 R;Fahnestock, M.; Bell, R.A. Gene 69, 257-264, 1988
                                                                                                                                                                                                                           A:Molecule type: mRNA
A:ResIdues: 1-307 <SCO
A:ResIdues: 1-307 <SCO
A:Cross-references: GB:V00836; NID:g53364; PIDN:CAA24221.1; PID:g53365
R:Ullrich, A.; Gray, A.; Berman, C.; Dull, T.J.
Nature 303, 821-825, 1983
A;Title: Human beta-nerve growth factor gene sequence highly homologous to A;Reference number: A93305; MUID:83244969; PMID:6688123
A;Accession: A93305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nerve growth factor beta chain precursor - mouse C:Species: Mus musculus (house mouse) C:Date: 30-Nov-1980 #sequence_revision 19-Feb-1984 #text_change 21-Jul-2000 C:Accession: A93301; A93305; A90366; I49689; I52891; A01400; I49690 R:Scott, J.; Selby, M.; Urdea, M.; Quiroga, M.; Bell, G.I.; Rutter, W.J. Nature 302, 538-540, 1983
A;Title: Amino acid sequences of mouse 2.5S nerve growth A;Reference number: A90366; MUID:73075048; PMID:4566923 A;Accession: A90366
                                                                         A;Cross-references: GB:K01759; NID:g200051; PIDN:AAA39820.1; PID:g387495 A;NOte: these authors believe that Met-67 1s probably the amino-terminal R;Angeletti, R.H.; Hermodson, M.A.; Bradshaw, R.A. Biochemistry 12, 100-115, 1973
                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-307 <ULL>
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A;Cross-references: GB:M14805; NID:g200053; PIDN:AAA39821.1; PID:g200054 C;Comment: The active molecule is a dimer of identical chains associated by noncovale C;Comment: Nerve growth factor is found in submaxillary gland in large quantities and nic sensory ganglia in vivo and in vitro and to increase cellular neurotubule levels
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A;Title: Sequence homology of human and mouse beta-NGF subunit A;Reference number: I52891; MUID:84206565; PMID:6327169
A;Accession: I52891
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R;Selby, M.J.; Edwards, R.; Sharp, F.; Rutter, W.J.
Mol. Cell. Biol. 7, 3057-3064, 1987
A;Title: Mouse nerve growth factor gene: Structure and A;Reference number: 149689; MUID:88038855; PMID:3670305
A;Accession: 149689
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C;Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein; growth factor; homodimer
C;Keywords: glycoprotein; growth factor; homodimer
F;1-187/Domain: signal sequence and propeptide #status predicted <SIG>
F;188-305/Product: nerve growth factor beta chain #status experimental
                                                                                                                                                                                                                                                                                                                                                                                      F;135,180/Binding site: carbohydrate (Asn) (covalent) *status predicted F;202-267,245-295,255-297/Disulfide bonds: *status experimental F;232/Binding site: carbohydrate (Asn) (covalent) *status absent
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A; Residues: 1-307 < RE3>
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CRGIDSKHWNSYCTTTHTFVKALTTD-EKQAAWRFIRIDTACVCVLSRKATR
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l; Mismatches 25
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A; Ncdecule type: DNA
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A; Molecule type: DNA
A; Restidues: 1-65, 'M', 67-247 < YAN>
A; Restidues: 1-65, 'M', 67-247 < YAN>
R; Maisonpierre, P.C.; Le Beau, M.M.; Espinosa III, R.; Ip, N.:
Genomics: 10, 558-568, 1991
A; Title: Human and rat barain-derived neurotrophic factor and
A; Title: Human and rat barain-derived neurotrophic factor and
A; Title: Human and rat barain-derived neurotrophic factor and A;Cross-references: GB.M37762; NID:g179402; PIDN:AAA51820.1; PID:g179403 R;Yancopoulos, G.D.; Maisonpierre, P.C.; Ip, N.Y.; Aldrich, T.H.; Bellusc Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990 A;Title: Neurotrophic factors, their receptors, and the signal transduction; Reference number: A60536; MUID:92111157; PMID:1966766 A;Accession: A60536 R;Jones, K.R.; Reichardt, L.F.
Proc. Natl. Acad. Sci. U.S.A. 87, 8060-8064, 1990
A;Title: Molecular cloning of a human gene that is a member of the nerve A;Reference number: A36208; MUID:91045937; PMID:2236018
A;Accession: B36208 C;Species: Homo sapiens (man)
C;Date: 03-Apr-1992 #sequence\_revision 30-Sep-1993 #text\_change
C;Accession: B36208; A60536; A40304; A37218; A61115; I38072 A; Status: not compared with A; Molecule type: DNA A; Residues: 1-247 < JON> brain-derived neurotrophic factor precursor - human conceptual translation signal transduction N.Y.; neurotrophin-3: Belluscio, Belluscio, growth facto pathways

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A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-65,'M',67-247 <ROS>
R;Stintani, A.; Ono, Y.; Kalsho, Y.; Igarashi, K.
Biochem. Biophys. Res. Commun. 182, 325-332, 1992
A;Title: Characterization of the 5'-flanking region of the human brain-derived neurotrop A;Reference number: 138072; MUID:92118032; PMID:1339267
A;Accession: 138072
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A;Title: Human platelets contain brain-derived neurotrophic factor.
A;Reference number: A37218; MUID:91038253; PMID:2230938
A;Accession: A37218
A;Accession: A37218
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 138-236 <YAN>
R;Rosenthal, A.; Goeddel, D.V.; Nguyen, T.; Martin, E.; Burton, L.E.; Shih, A.; Laramee, Endocrinology 129, 1289-1294, 1991
A;Title: Primary structure and biological activity of human brain-derived neurotrophic in A;Reference number: A61115; MUID:91339743; PMID:1874171
A;Accession: A61115
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A.Cross-references: GDB:125916; OMIM:113505
A.Map position: 11p13-11p13
C.Superfamily: nerve growth factor beta chain
C.Keywords: dimer; glycoprotein
C.Keywords: dimer; glycoprotein
C.H.J.Commain: signal sequence #status predicted <SIG>
F.11-18/Domain: propeptide #status predicted <PRO>
F.129-247/Product: brain-derived neurotrophic factor #status predicted <MAT>
F.121/Binding site: carbohydrate (Asn) (covalent) #status experimental
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A;Note: the sequence in GenBank entry HUMBDNFB, release 106.0, (PID:g896463) begins tran
R;Yamamoto, H.; Gurney, M.E.
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A;Note: the authors do not discuss this mRNA sequence in this reference; attribution is
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A; Residues: 1-247 <SHI>
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33 ARRGELSVCDSISEMVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYT 192
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felis silve
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cyprinus ca
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cavia porce
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InterPro; IPR002072; NGF.
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SIMILARITY: BELONGS TO THE NOR-PROPERTY.
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FUNCTION: SEEMS TO PROMOTES THE
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InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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Hohn A., Leibrock J., Bailey K., Barde '
"Identification and characterization of
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s09155; s09155.
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NGF_2;
                                             98.2%;
99.2%;
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                                                                          NEUROTROPHIN-3.
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                                  Score 641; DB
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SEQUENCE FROM N.A.
MEDLINE-90319130; PubMed-2164684;
Ernfors P., Ibanez C.F., Ebendal T., Olson L., Pers
Molecular cloning and neurotrophic activities of a
structural similarities to nerve growth factor: de
topographical expression in the brain.";
Natl. Acad. Sci. U.S.A. 87:5454-5458(1990).
                                                                                                                                                                                                  This SWI
between
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Maisonpierre P.C., Belluscic L., Squinto S., Ip
Lindsay R.M., Yancopoulos G.D.;
"Neurotrophin-3: a neurotrophic factor related
"Science 247:1446-1451(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P18280;
01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic (Nerve growth factor 2) (NGF-2).
                                                                                                                                                                       use
                                                                                                                                                                                                                                            novel member abundantly expressed in Xenopus over Neuron 6:845-858(1991).

-I- FUNCTION: SEEMS TO PROMOTES THE SURVIVAL OF PROPRIOCEPTIVE SENSORY NEURONS.

-I- SUBCELLULAR LOCATION: SECRETED.
-I- TISSUE SPECIFICITY: BEAIN AND PERIPHERAL TISTISSES SPECIFICITY: BRAIN AND PERIPHERAL TISTISSES SPECIFICITY: BEAIN AND PERIPHERAL TISTISSES SPECIFICITY: BEAIN AND PERIPHERAL TISTISSES SPECIFICITY: BEAIN THE NGF-BETA FAMILY.
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"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE-91365361; PubMed-1889806;
Maisonpierre P.C., le Beau M.M., J
Belluscio L., de la Monte S.M., S
                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-Sprague-Dawley; TISSUE-Liver; MEDLINE-91222573; PubMed-2025430;
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               8L; M34643; AAA41313.1;
LI, M33968; AAA41727.1;
SL; M61179; AAA63497.1;
R35781; A35781.
R35781; A35781.
R40094; A40094;
R5P; P20783; 1B8K.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            and rat brain-derived neurotrophic factor and neurotrophin-3:
tructures, distributions, and chromosomal localizations.";
                                                                                                                   non-profit institutions as long as its content is in no way d and this statement is not removed. Usage by and for commercial s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
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30-MAY-2000 (Rel. 3
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Maisonpierre P., Belluscio
"Gene sequences of chicken
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PROSITE; PS50270; NGF
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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Pfam; PF00243; NGF; 1
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                                              European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in
                                                                                             PROPRIOCEPTIVE SENSORY NEURONS.
SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                 SWISS-PROT entry is copyright. It is produced through a ceen the Swiss Institute of Bioinformatics and the EMBL
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(Rel. 39, Last annotation update)
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PRINTS; PR00438; GFCYSKNOT.
PRINTS; PR00268; NGF; ProDom; PD002052; NGF; 1.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
                                       InterPro; IPR002072; No Pfam; PF00243; NGF; 1.
                                                                              EMBL; AF192538; AAR
HSSP; P20783; 188K
                                                                                                                                  use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isborsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE-20211727; PubMed-10745216;
MEDLINE-20211727; PubMed-10745216;
Lein E.S., Hohn A., Shatz C.J.;
"Dynamic regulation of BDNF and NT-3
                                                                                                                                                                                                                                        between
                                                                                                                                                                                                                                                                                                                                                                                                     development.
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- FUNCTION: SEEMS TO PROMOTES
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SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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Xenopus laevis (African clawed frog).

Eukaryota; Metazoa; Chordata; Craniata; Vertel
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Amphibia; Batrachia; Anura; Me
                                                                                                                                                                                                                                                                                                                                                             Hallboeoek F., Ibanez C.F., Persson H.; 
"Evolutionary studies of the nerve grow novel member abundantly expressed in Xes 
Neuron 6:845-858(1991).
                                                                                                                                             the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                             -i- FUNCTION: SEEMS TO PROMOTES THE PROPRIOCEPTIVE SENSORY NEURONS.
-i- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xie K., Wang T., Olafsson P., Mizuno K., Lu B., "Activity-dependent expression of NT-3 in muscle implications in the development of neuromuscular J. Neurosci. 17:2947-2958(1997).
                                       EMBL; U27576; AAB17723.1; HSSP; P20783; 188K.
                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                  between
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PRINTS; PR00268; NGF; 1.
PRODOM; PD002052; NGF; 1.
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PROSITE; PS50270; NGF_2; 1.
Growth factor; Signal.
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(4)
SEQUENCE OF 181-222 FROM N.A.
SEQUENCE OF 181-222 FROM N.A.
MEDLINE-9122573; PubMed-2025430;
Hallboeoek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family "Evolutionary studies of the nerve growth factor family
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                                                                                                                                                                                                                                                                         Meier R., Becker-Andre M., Gotz R., Heumann R., Shaw A., Thoenen H.; "Molecular cloning of bovine and chick nerve growth factor (NGF): delineation of conserved and unconserved domains and their relationship to the biological activity and antigenicity of NGF."; EMBO J. 5:1489-1493(1986).
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Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
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Pred. No. 4
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EMBL; X04067; CAA27703.1; -.
EMBL; M26810, AAA48984.1; -.
PIR; A24857; A24857.
PIR; A24857; A24857.
PIR; A26311; A26311.
HSSP; P01139; IBET_
InterPro; IPR0020772; NGF.
                                                                                                                         NGF_XENLA STANDARD; PRT; 231 AA. P21617; P21617; Ol-MAY-1991 (Rel. 18, Created) Ol-MAY-1991 (Rel. 37, Last sequence update) 15-DEC-1998 (Rel. 37, Last annotation update) Nerve growth factor precursor (NGF). Xenopus laevis (African clawed frog). Xenopus laevis (African clawed frog). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
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Carriero F., Campioni
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                                 oocytes and
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                                                                                                                     Xenopodinae;
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                                                                                                         NCBI_TaxID=8355;
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                                                                                                                                                                                                                                                                                                                                                                    NGF_PIG
Q29074;
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"Evolutionary studies of the nerve grow
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  STRAIN-Large white;
MEDLINE-94313891; P
                                                                                                                                         Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                NGFB.
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SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT FORCES
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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139; 1BET.
; IPRO02072; NGF.
; 13. NGF; 1.
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115
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                                                                                                                                                                                                                                               (Rel. 35, Created)
(Rel. 35, Last sequence update)
(Rel. 35, Last annotation update)
growth factor precursor (Beta-NGF)
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     PubMed-8039422;
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NERVOUS SYSTEMS. IT
SYMPATHETIC AND
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MBL outstation .
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Best Local S
Matches 68
                                                                                                                                                                                                                    NGF_RAT
91-MAY-1992 (Rel. 22, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation updat
01-NOV-1997 (Rel. 36, Last annotation updat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Growth 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      consensus sequence conserved among species.";
Cytogenet. Cell Genet. 67:120-125(1994).
-1- FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; L31898; AAA21301.1; -. HSSP; P01139; 1BET.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lahbib-Mansais Y., Mellink C., Yerle M. "A new marker (NGFB) on pig chromosome
                    SEQUENCE FROM N.A.
MEDLINE-89037723; PubMed-3184206;
Whittemore S.R., Friedman P.L., L
Gonzalez-Carvajal M., Holets V.R.
"Rat beta-nerve growth factor seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
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Mammalia; Eutheria;
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                                                                                                                                        NCBI_TaxID=10116;
                                                                                                                                                                                                  Rattus norvegicus (Rat).
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peta-nerve growth factor
hippocampus.";
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                                                                                                                                                                 Chordata;
Rodentia;
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BY SIMILARITY.
BETA-NERVE GROWTH FACE
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N-LINKED (GLCNAC...
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Pred. No. 1.
                          sequence and
                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
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(Beta-NGF)
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                              of synthesis
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MBL outstation -
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PRODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF1; 1.
PROSITE; PS50270; NGF_2; 1.
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                                                                                                                                                                                                                            NT4_XENLA STANDARD; PRT; 2724727; P24727; Created) Ol-MAR-1992 (Rel. 21, Created) Ol-MAR-1992 (Rel. 21, Last sequence up 30-MAR-2000 (Rel. 39, Last annotation Neurotrophin-4 precursor (NT-4). Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; M36589; AAA41697.1;
HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                              Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-Sprague-Dawley; TISSUE-Liv MEDLINE-91222573; PubMed-2025430;
                                                                             NCBI_TaxID-8355;
                                                                                                                      Xenopodinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROPEP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neurosci.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT FOR THE DE MAINTENANCE OF THE SYMPATHETIC AND SENSORY NERVOUS SY STIMULATES DIVISION AND DIFFERENTIATION OF SYMPATHETIEMBRYONIC SENSORY NEURONS.
SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT FORCES.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HMGEFSVCDSVSVWVGDKTTATDIKGKEVTVLGEVNINNSVFKQYFFETKCRAPNPVESG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor;
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                                                                                                              Xenopus.
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59.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 88 ;
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BETA-NERVE GROWTH FACTOR.

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BY SIMILARITY.

OF THE PROOF THE PARTY OF THE PA
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pred. No. 3.5e
20; Mismatches
                                                                                                                                                                                                                                                                                                                                                  update)
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                                                                                                                                                                                                                                                                                                             update)
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8.5e-32;
hes 24;
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NERVOUS SYSTEMS. IT
SYMPATHETIC AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241;
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Best Local S
Matches 68
                                                                                                                        NGF_HUMAN
P01138;
21-JUL-1986
01-JAN-1990
16-OCT-2001
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DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE FROM N.A. MEDLINE-83244969; Ullrich A., Gray A
                                                            Homo sapiens (Human
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                    NGFB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Growth
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2; Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Ovary;
MEDLINE-91222573; PubMed-2025430;
Hallboeoek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family novel member abundantly expressed in Xenopus ovary.";
Neuron 6.845-858(1991).
-1- FUNCTION: NT-4 COULD PLAY A ROLE IN OOGENESIS AND/OR
                                                                                                             Beta-nerve growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR002072; NGF Pfam; PF00243; NGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send
                                                NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; P34130; 1B98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR; JH0400; JH0400.
                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                      123
                                                                                                                                                                                                                                                             67
                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE SPECIFICITY: SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: NT-4 COULD PLAY A ROLE IN OOGENESIS AND/OR EARLY EMBRYGGENESIS. NT-4 INTERACTS WITH THE LOW AFFINITY NGF RECEPTOR AND ELICITS NEURITE OUTGROWTH FROM EXPLANTED DOSAL ROOT GANGLIA WITH NO AND LOWER ACTIVITY IN SYMPATHETIC AND NODOSE GANGLIA,
                                                                                                                                                                                                                                    SHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESPECTIVELY
                                                                                                                                                                                                                                                                                   SRRGELSVCDSVNVWVTDKRTAVDDRGKIVTVMSEIQTLTGPLKQYFFETKCNPSGSTTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; PD002052; NGF; 1.
SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PR00268; NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                  106
236
                                                                                                                        (Rel.
                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                     (Human)
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                                                                                                                                                                          STANDARD;
                                                                                                                         01,
13,
40,
              PubMed-6688123;
                                                                                                             factor precursor
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113
236
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47
                                                              Chordata;
Primates;
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                                                                                                                                                                                                                                                                                                                                                                                     26213 MW;
                                                                                                                                                                                                                                                                                                                                                59.6%;
  Berman C.,
                                                                                                          Last sequence update)
Last annotation update)
tor precursor (Beta-NGF).
                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OVARY.
TO THE NGF-BETA FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                  NEUROTROPHIN-4.
BY SIMILARITY.
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BY SIMILARITY.
OF SIMILARITY.
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
NLINKED (GLCNAC. . .) (POTENTIAL).
NAM; A210F97E2016357D CRC64;
                                                                                                                                                                                                                                                                                                                                   Score 378; DB 1;
Pred. No. 3.8e-32;
6; Mismatches 30
                                                             Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
  Dull T.J.;
                                                                                                                                                                          241
                                                                                                                                                                          ₹
                                                              Hominidae;
                                                                                                                                                                                                                                                                                                                                    30;
                                                                                                                                                                                                                                                                                                                                                         Length 236
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                                                                          Euteleostomi;
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tent is in
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                                                                                  Query Match
Best Local
                                         Matches
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EMBL; M21062; AAA59931.1; -
EMBL; X52599; CAA36832.1; -
PIR; A01199; NGHUBM.
PIR; S10253; S10253.
                                                                                 DISULFID DISULFID DISULFID CARBOHYD CARBOHYD SEQUENCE
                                                                                                                                                                              PROSITE;
Growth fa
                                                                                                                                                                                                                                                                                                                                                        the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=90326556; PubMed=2374737;
Borsani G., Pizzuti A., Rugarii E.I.,
Sidoli A., Scarlato G., Barelle F.E.;
"CDNA sequence of human beta NGF.";
Nucleic Acids Res. 18:4020-4020(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ullrich A., Gray A., Berman C., Coussens L., Dull T.J., "Sequence homology of human and mouse beta-NGF subunit Cold Spring Harb. Symp. Quant. Biol. 48:435-442(1983).
                                                                                                                                                                                                           PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature [2]
                                                                                                                                                                     SIGNAL
                                                                                                                                                                                      PROSITE; PS00248; NGF_1; PROSITE; PS50270; NGF_2;
                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-84206565;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM
                                                                                                                                                            PROPEP
                                                                                                                                                                                                                                             Pfam; PF00243;
                                                                                                                                                                                                                                                                          Genew; HGNC:7808; NGFB.
                                                                                                                                                                                                                                                                                      HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Leukocyte;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 178-219 FROM N.A.
                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human beta-nerve growth
  129
                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBJUNIT: HOMODIMER, ASSOCIATED BY NONCOVALE SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
HRGEFSVCDSVSVWVGDKTTATDIKGKEVMVLGEVNINNSVFKQYFFETKCRDPNPVDSG
        HRGEYSVCDSESLWYDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG
                                                                                                                                                                                                                                                                162030;
                                                                                                                                                                                                                                                                                                                                                                                                             SWISS-PROT entry is copyright. It is produced through en the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of mouse.
                                                                                                                                                                                                                                                                                     P01139;
                                         l Similarity
67; Conser
                                                                                                                                                                              factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303:821-825(1983).
                                                                                                                                                                                                                                                      IPR002072; NGF.
                                                                                  241 AA;
                                         Conservative
                                                                                                      19
122
136
179
189
                                                                                                                                                                                                                                                                                     1BET
                                                                                                                                                                                                                                          NGF; 1.
                                                                                                                                                                               Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=6327169;
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121
241
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229
231
69
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59
                                                  . 8 %;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor gene sequence highly homologous to
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                                         18;
                                     Score 373.5; pred. No. 1.1e
18; Mismatches
                                                                                BETA-NERVE GROWTH FAC
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
                                                                                                                                                                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e growth factor family reveal
in Xenopus ovary.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY NONCOVALENT FORCES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Falini
                                                   .1e-31;
                                                             DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FOR THE DEVELOPMENT NERVOUS SYSTEMS. IT SYMPATHETIC AND
                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Silani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T.J.;
                                                          Length
                                         Indels
                                                                                           (POTENTIAL)
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P13600; O189
O1-JAN-1990
   SIGNAL
PROPEP
CHAIN
DISULFID
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DISULFID
CARBOHYD
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CONFLICT
                                                                                                                                                                                                                                                                         Growth 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long a modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Molecular cloning of bovine and chick nerve growth factor (NGF): delineation of conserved and unconserved domains and their relationship to the biological activity and antigenicity of NGF." EMBO J. 5:1489-1493(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; Y09566; CAA70759.1; -.
EMBL; M26809; AAA30666.1; -.
PIR; A26312; A26312.
HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 107-231 FROM N.A. MEDLINE-86300647; PubMed-2427334; Meler R., Becker-Andre M., Gotz R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NGFB
                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD002052; NG
SMART; SM00140; NGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chromosome 3 band q23
Cytogenet. Cell Genet.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-97430845;
Elduque C., Laurer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR002072; NGF Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cytogenet.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Assignment of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bovidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1990 (Rel. 13, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
Beta-nerve growth factor precursor (Beta-NGF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aragoza P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EW European Bioinformatics Institute. There are no restr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: NERVE GROWTH FACTOR IS IMPORTANT MAINTENANCE OF THE SYMPATHETIC AND SENSORY STIMULATES DIVISION AND DIFFERENTIATION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBRYONIC SENSORY NEURONS.
SUBUNIT: HOMODIMER, ASSOCIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRGIDSKHWNSYCTTTHTEVKALTMD-GKQAAWREIRIDTACVCVLSRKAVR
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                                                                                                                                                                                                                                                                                              factor;
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                                                                                                                                                                                                                                                                                                                                PS50270; NGF_2;
                                                                                                                                                                                                                                                                                                                                                            PS00248; NGF_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bovinae;
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                                                                                                                                                                                                                                                                                                 Signal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=9284944;
nt P., Hayes H.,
                                                                                                                                                                                                                                                                                                                                                                                                                          NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               beta-nerve growth factor (NGFB) to bovine q23 by in situ hybridization."; net. 77:306-307(1997).
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POTENTIAL.

BY SIMILARITY.

BETA-NERVE GROWTH FACTOR.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

CONTROL OF CONTROL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ormatics and the EMBL outs
There are no restrictions
ong as its content is in
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                                                                   (POTENTIAL).
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Best Local
                                                                                                                                          Matches
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SEQUENCE
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CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NGF_CAVPO P19093;
                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Beta-nerve growth factor precursor (Beta-NG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR; JL0097; JL0097.
HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                              Growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00268; NGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Prostate;
MEDLINE-89177243; PubMed-2926397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cavia porcellus (Guinea pig).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         179
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBUNIT: HOMODIMER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CRGIDDKHWNSQCKTSQTYVRALTSENNKLYGWRWIRIDTSCVSALSRKIGR 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRGIDAKHWNSYCTTTHTFVKALTMD-GKQAAWRFIRIDTACVCVLSRKTGQ
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                                                                                  HRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG
                                                            HMGEFSVCDSVSVMVADKTTATDIKGKEVTVLAEVNVNNNVFKQYFFETKCRDPSPVDSG
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                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                          PS00248; NGF_1;
PS50270; NGF_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230
231 AA;
                                                                                                                                                                                                                    241 AA;
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                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                        Signal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     231
25437 MW;
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58.9%;
                                                                                                                                                                                                                    26821 MW;
                                                                                                                                                          56.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ASSOCIATED BY NONCOVALENT FORCES TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                        20;
                                                                                                                                    Score 371.5;
Pred. No. 1.9e
20; Mismatches
                                                                                                                                                                                                                BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
; 2F4E25B197804BF4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 372.5;
Pred. No. 1.
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01605099291A418C
                                                                                                                                                                                                                                                                                                                                    BETA-NERVE GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Hystricognathi; Cavidae; Cavia.
                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isackson P.J.; of beta-nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; DB 1;
                                                                                                                                                            .9e-31;
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                                                                                                                                                                            DB 1;
                                                                                                                                        26;
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3C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FOR THE DEVELOPMENT AND NERVOUS SYSTEMS. IT SYMPATHETIC AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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SEQUENCE
Homo sapiens (Human)
Eukaryota; Metazoa; (
Mammalia; Eutheria; I
NCBI_TaxID=9806;
[1]
                                                                                                                                  Q9UKL8
Q9UKL8;
Q1-MAY-2000
Q1-MAY-2000
Q1-MAY-2000
Q1-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Beta-nerve growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00268; NGF. ProDom; PD002052; NGF; 1. SMART; SM00140; NGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (JAN-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                               Nerve growth NGFB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196
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                                                                                                                                                                                                                                                                                                                                                                              CRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P01139; 1BET.
Pro; 1PR002072; NGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
67; Conserv
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241 AA;
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241 AA;
                         is (Human).
Metazoa; Chordata; C
---+herla; Primates; (
                                                                                                                  0 (TrEMBLIEL 13, 0
0 (TrEMBLIEL 13, 1
2 (TrEMBLIEL 20, 1
th factor B.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
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                                                                                                                                                                                                             PRELIMINARY;
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27803 MW;
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19, Last annotation update)
(Fragment)
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Last sequ
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Pred. No. 7.5e-58;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 373.5;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                        Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AB95E457C7B07113 CRC64;
                                                                                                                                                                                                                 PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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                                                                                                                                     sequence up
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5; DB 4;
3.8e-34;
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Matches
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Best Local
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                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00268; NGF: 1.
PRODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 241 AA; 26959 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (MAY-1999) to t
EMBL; AF150960; AAD55975
HSSP; P01139; 1BET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chung Kuo Ying Yung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE-99256269; PubMed-10322959;
Tong Y., Wang H., Chen W.;
                                                                  NON_TER
SEQUENCE
                                                                                                                                   Submitted (JAN-2000) to the EMBL; AB037518; BAA90438.1; HSSP; PO1139; HBET. InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                             Q9N2F1;
01-OCT-2000 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                    Q9N2F1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR002072; NGF Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Cloning and factor.";
                                                                                  Prodom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
SPROSITE; PS00248; NGF=1; 1.
PROSITE; PS50270; NGF=2; 1.
NOW TEE:
                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9598;
                                                                                                                                                                                                                                              Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                            PRINTS; PR00268; NGF.
                                                                                                                                                                                             Kitano T., Kobayakawa H.,
                                                                                                                                                                                                       STRAIN-CHIMP-220;
                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                           BETA-NGF
                                                                                                                                                                                                                                                                                   Beta-nerve growth
                                                                                                                                                                                    "Silver Project.
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HRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPVKNG
                            Similarity 59.8 67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang
                                                                  241
241 AA;
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                                                                  241
26868 MW;
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59.8%;
                                      59.8%;
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                                                                                                                                                                                                                                                                                                                  Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 373.5;
Pred. No. 3.8
                                                                                                                                                                             EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hsueh
                             Score 373.5; DB 6
Pred. No. 3.8e-34;
8; Mismatches 26
                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                Craniata; Ve Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     619DFC65EB3BD671 CRC64;
                                                                    B39FAA8912C00A0B CRC64;
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                                                                                                                                                                                                                                                         Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .8e-34;
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                                                                                                                                                                                                                                                 Hominidae;
                                                                                                                                                                                                                                                                                                         update)
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                                                  Length
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Best I
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                                                                                                                                                                                                                                                                                                                                                                                                 Q9N2E9;
Q9N2E9;
01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                              Kitano T., Kobayakawa H., Se "Silver Project.";
Submitted (JAN-2000) to the EMBL; AB037520; BAA90440.1;
HSSP; P01139; 1BET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gorilla gorilla (gorilla).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                   Beta-nerve growth BETA-NGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                  SEQUENCE FROM N.A. STRAIN-ORAN-U1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00268; NGF:
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BETA-NGF.
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01-OCT-2000
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                                                                                                                                                                                                                                                                                                     Pongo pygmaeus (Orangutan).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (JAN-2000) to the EMBL; AB037519; BAA90439.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Beta-nerve growth
                          InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                          NCBI_TaxID=9600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kitano T., Kobayakawa
"Silver Project.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-GORILLA-U1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9593;
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241 AA;
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(TrEMBLrel. 15, Last sequence up)
(TrEMBLrel. 19, Last annotation)
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(TrEMBLrel. 15, Last se
(TrEMBLrel. 19, Last an
growth factor (Fragment)
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                                                                                                                                                                                                                                                                                    Primates;
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59.8%;
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                                                                                                                   EMBL/GenBank/DDBJ
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Pred. No. 3.8e-34;
8; Mismatches 26;
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Catarrhini; Hominidae
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                                                                                                                                                                                                                                                                                Hominidae;
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; Gorilla.
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                                                                                                                                                                                                                                                                             Pongo.
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ID Q9
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Best Local :
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Q918L2;
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  FROM N.A
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SO PT
    BDNF (Fragment).
Poephila guttata (Zebra finch) (Taeniopygia guttata).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Passeriformes; Estrildidae;
Estrildinae; Taeniopygia.
                                                                                  01-OCT-2000 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00243; NGF; 1.
ProDom; PD002052; NGF; 1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 241 AA; 26964 MW; 7452
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang Y., Zhang B., Zhou Y.
Submitted (AUG-2001) to the
EMBL; AF411526; AAL105874.1;
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-DEC-2001 (TrEMBLrel. 19, 01-DEC-2001 (TrEMBLrel. 19, 01-MAR-2002 (TrEMBLrel. 20, Nerve growth factor beta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
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NCBI_TaxID=59729;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                    . Similarity
66; Conserv
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| Similarity 59.8%;
| 67; Conservative |
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241 AA;
                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                    Conservative
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EMBL/GenBank/DDBJ
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                                                                                                                                                                                                                                                                                                                                 Score 370.5; DB 4
Pred. No. 8.4e-34;
9; Mismatches 26
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Pred. No. 3.8e-34;
8; Mismatches 26
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                                                                                     annotation
                                                                                                 sequence update)
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Interpro; IPR002072; NGF.
Pfam; PF00243; NGF; 1
PFINTS; PR00268; NGF.
Pr00Dom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PR0SITE; PS00248; NGF_1; 1.
PR0SITE; PS00270; NGF_2; 1.
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Japalura splendida.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Canidaesuria: Squamata; Iguania; Acrodonta; Agamidae; Draconinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8QG76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

Cao M., Yang Y.H., Zhang Y.Z.;

Buphibians and reptiles and its application in the research o phylogeny and taxonomy.";

Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AF497713; AAM18714.1;
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                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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                                                                                                                               KEGCRGIDKRYWNSQCRTTQSYVRALTMDNKKRVGWRFIRIDTSCVCTLTIKRGR
                                                                                                                                                                                                                    ARRGEFSVCDSTSEWVTAAEKKTAVDMSGATVTVLEKVPVPKGQLKQYFYETKCNSKGYT
                                                                                                                                                                                                                                                             SHRGEYSVCDSESLWVT--DKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPV
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                                                                                                                                                                        KNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGR
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                                                                                                                                                                                                                                                                                                                                                                                          246
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                                                                                                                                                                                                                                                                                                                                                                                                                                       128
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                      PRELIMINARY;
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57.48;
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Last annotation updat
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                                                                                                                                                                                                                                                                                                       Score 355; DB
Pred. No. 4.9e
l8; Mismatches
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                        PRT;
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                        153
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, 4.9e-32;
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RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Sasaki H., Sato K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Hayashizaki V.
RA Hayashizaki V.
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                                                                                                                                                                                                           RESULT
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Best Local S
Matches 66
                                                                                                                Q90W38 PQ90W38;
01-DEC-2001 (
01-DEC-2001 (
01-MAR-2002 (
                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-DEC-2001 (TrEMBLrel. 19, Brain derived neurotrophic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nature 409:685-690(2001)
EMBL; AK017559; BAB30805
HSSP; P23560; 1B8M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kawai J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=21085660;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota;
Mammalia; |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
Lepidosauria; Squamata;
Viperidae; Crotalinae; F
NCBI_TaxID=8726;
[1]
                                          Bothrops jararacussu (Jararacussu).
Eukaryota; Metazoa; Chordata; Craniat;
Lepidosauria; Squamata; Scleroglossa;
                                                                                       NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00268; NGF. ProDom; PD002052; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P23560; 1B8M.
MGD; MGI:88145; Bdnf.
                                                                                                    Putative
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Functional annotation of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         łayashizaki Y.;
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                                                                                                                                                                                                                                                                                                                             SHRGEYSVCDSESLWVT--DKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPV 64
                                                                                                                                                                                                                                                  KEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTLTIKRGR
                                                                                                                                                                                                                                                                  KNGCRGIDDKHWNSOCKTSOTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGR 119
                                                                                                                                                                                                                                                                                                              ARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYT
                                                                                                                                                                                                                                                                                                                                                                      66;
                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                PS00248; NGF_1; 1.
PS50270; NGF_2; 1.
153 AA; 17519 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FROM
                                                                                                    neurotrophic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shinagawa A., Shibata K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Metazoa;
Eutheria;
                                                                                                                  (TrEMBLrel. (TrEMBLrel. )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Mouse).
|etazoa; Chordata;
|theria; Rodentia;
                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-EMBRYO; pubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                      54.2%;
                                                                                                    growth
                              Bothrops
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17, Last sequence update;
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Pred.
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                                                           Craniata;
                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                   CA8EB8944CEE5B37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                    354;
No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yoshino M.,
                                                                                                                                                                               241
                                             Serpentes;
                                                             Vertebrata; Euteleostom1;
                                                                                                                                                                                                                                                                                                                                                                                       DB 11;
3.5e-32;
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                                               Colubroidea;
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Cintra A.C.O., Giglio J.R., Franca S.C.,
Thira A.C.O., Giglio J.R., Franca S.C.,
The Molecular cloning and cDNA sequence of a nerve growth factor
precursor from Bothrops jararacussu venomous gland.";
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AV007318; AAG12169.1;
L. Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
REMBL; AUG-2000; AUG-2000; AUG-2000; AUG-2000; AUG-2000; AUG-2000; AUG-2000; AUG-2000; AUG-2000
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Best L
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Best Local
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                                                                                                                                                                 Matches
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01-MAY-1999
01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                            deduced amino acid sequences. Submitted (APR-1996) to the EEMBL; U56639; AAD10843.1; -. HSSP; P23560; LBBM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     097759;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                              PROSITE; PS00248; NGF_1; 1. PROSITE; PS50270; NGF_2; 1. SEQUENCE 247 AA; 27870 MW;
                                                                                                                                                                                                                                                                                                          PRINTS; PR00268; NGF: ProDom; PD002052; NGF; 1. SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ailurus fulgens (Lesser panda).
Eukaryota; Metazoa; Chordata; C
Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Brain derived neurotrophic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Giant Panda (GP) and Lesser Panda (LP) deduced amino acid sequences.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                   133
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  193
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                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
PVPTGCRGIDARHWNSYCTTTNTFVKALTMEGNQ-ASWRFIRIDTACVCVISRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRK 116
                                                                                DHPVHNRGEYSVCDSVNVWVANKTTATDIRGNVVTVMVDVNINNNVYKQYFFETKCRNPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 (TrEMBLrel 10, C
9 (TrEMBLrel 10, I
1 (TrEMBLrel 17, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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                                                                                                                                                                                54.2%;
                                                                                                                                                                 17;
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Last annotation update)
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Pred. No. 6.2e-32;
2; Mismatches 27
                                                                                                                                                               Score 354; DB 6;
Pred. No. 6.4e-32;
7; Mismatches 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euto; Fissipedia; Procyonidae;
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                                                                                                                                                                                                                                                FE8C62CF1A6C03EE CRC64;
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RESULT Q8VHH4

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Best Local
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Best Local
                                                                                                                                                                                                                SEQUENCE FROM N.A.
CAO M., YANG Y.H., Zhang Y.Z.;
CAO M., YANG Y.H., Zhang Y.Z.;
"Molecular cloning of brain deri
amphibians and reptiles and its
phylogeny and taxonomy.";
Submitted (APR-2002) to the EMBI
EMBL; AF497715; AAM18716.1; -.
CHAIN 128 246 BRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Anorexia mouse ORF BDNF.";
Submitted (DEC-2001) to the EN
EMBL; AR459642; AAL58475.1;
InterPro; IPR002072; NGF,
Pfam; PP00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8VHH4;
01-MAR-2002
01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-B6C3FE-A/A-ANXA/+A;
Kim S.J., Kim C.S., Cha Y.J.,
Kim S.J., Kim C.S., Cha Y.J.,
                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Lepidosauria; Squamata; Scleroglossa; Serpentes; Col Colubridae; Colubrinae; Cyclophiops. NCBI_TaxID=192173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8QG74
Q8QG74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00268; NGF; Prodom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 249 AA; 28109 MW; 21CEAEA60A235D97 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, Brain derived neurotrophic f
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ARRGELSVCDSISEWYTAADKKTAVDMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYT
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                                        SHRGEYSVCDSESLWVT--DKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEARPV
                                                                                   66; Conservative
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llarity 57.48;
Conservative 1
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                                                                                                                                                                       AA;
                                                                                                                                                                       27773 MW;
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21,
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; Pred. NO. 6.5e
17; Mismatches
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Last annotation updat
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                                                                                   Score 352; DB 13;
Pred. No. 1.1e-31;
B; Mismatches 29;
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Search completed: December 2, Job time: 18.5698 secs
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CAO M., Yang Y.H., Zhang Y.Z.;

EMBL, AF497714; AAM18715.1;

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Iguania; Acrodonta; Agamidae; Agaminae;
Phrynocephalus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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66; Conserv
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27792 MW; 7709D3058B7AFA30 CRC64;
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Minimum
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4: /cgn2_6/ptodata/1,
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Listing first 45 summaries
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US-09-675-503-5
US-08-911-662-2
US-09-363-573-5
US-09-664-295-2
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US-09-363-573-5
US-08-340-131-3
US-08-340-131-3
US-08-410-691-12
US-08-910-66-065A-2
PCT-US95-06918-2
PCT-US95-06918-2
PCT-US95-06918-2
PCT-US95-06918-2
US-08-340-131-4
US-08-214-214A-1
US-08-340-131-4
US-09-872-090-11
US-08-910-691-11
US-08-910-691-7
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US-08-928-694-4
US-09-214-214A-6
US-08-928-694-4
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Sequence
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100.0% 100.0% SESLWV	ion US/09675503  Louis E. er, Charles H. er, Charles H. canne T. ISOLATION OF MIXTURE CONTA USING HYDROPH NENT. 037C2 1906-01-15 1996-11-15 1997-05-29 UMBER: 60/0478 1997-05-29 UMBER: 08/9708 1997-11-4 1998-07-29 5: 09/3635 1999-07-29 6or Windows Ver ien	119 120 120 120 1120 1117 1117 1117 1118 1118 1118 1120 120 120 120 120 120 120
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100.0%; Score 653; DB 4; Length 120; 100.0%; Pred. No. 3.4e-70; 110.0%; Pred. No. 3.ee-70; 110.0%; Pre	Dation US/09675503  N: N: N: Louis E. Lizer, Charles H. Joanne T. N: ISOLATION OF NEUROTROPHINS FROM A N: N: MIXTURE CONTAINING OTHER PROTEINS AND NEUROT N: USING HYDROPHOBIC INTERACTION CHROMATOGRAPHY GENENT.037C2 CON NUMBER: 00/09/675,503  VIE: 2000-09-29 NUMBER: 60/030838 196-11-15 197-05-29 NUMBER: 60/047855 199-11-14 NUMBER: 08/970865 1997-07-29 NOS: 1999-07-29 Ofor Windows Version 4.0	US-09-872-090-6 US-09-214-214A-3 US-09-255-953-3 US-09-872-090-3 US-09-872-090-7 US-09-872-090-7 US-09-872-090-5 US-09-066-065A-9 US-09-066-065A-8 US-09-066-065A-8
h 120;  IS 0; G  KQYFYETRCKE	ND NEUROTROPHIN ATOGRAPHY	sequence
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                                                                                                                         ; ORGANISM: Homo sapiens US-08-581-662-2
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                                                                                                                                                          SEQ ID NO 2
LENGTH: 119
TYPE: PRT
                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
                                                                                                                                                                                                                                                                                                                               sequence 2, Application US/08581662
Patent No. 6121235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
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                                                      Matches
                                                                                       Query Match
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FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
NAME: TOICHIA, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: p1063R2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-8674
                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/08/581,662
CURRENT FILING DATE: 1995-12-29
NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                 FILE REFERENCE: P0981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 Inch, 1.44 Mb floppy
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Winpatin (Genentech)
CURRENT APPLICATION DATA:
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APPLICATION NUMBER: 60/030838
FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
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STATE: Californi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/970,865
FILING DATE: 14-No. 6005081-1997
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2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 61
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                                                    tch 98.9%; So al Similarity 100.0%; F 119; Conservative 0;
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100.0%; Pr
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Pred. No. 2.3e-69;
                                                                      Score 646;
Pred. No.
                                                        Mismatches
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                                                                        2.3e-69;
                                                                                          DB 3;
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                                                                                   US-09-664-295-2
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                             Sequence 2, Application US/09664295 Patent No. 6429196 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                  Matches 119;
                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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APPLICANT: Louis
                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acid
APPLICANT: Gao, Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Louis E. Burton, Charles H. Schmelzer, Joanne T. TITLE OF INVENTION: Purification of NGF NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/970,86
FILING DATE: 14-No. 6.184360-1997
APPLICATION NUMBER: 60/030838
FILING DATE: 11/15/1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/047855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: P1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 5/29/1997
ATTORNEY/AGENT INFORMATION:
NAME: Torchia, PhD., Time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
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                                                                                                                                                     NAME: Torchia, PhD., Timoth
REGISTRATION NUMBER: 36,700
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: Amino Acid
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100.0%; pred. No. 2.3e-69;
1tive 0; Mismatches 0;
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FILE REFERENCE: GENENT.051C1

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LENGTH: 119
TYPE: PRT
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Best Local Similarity
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                                Query Match
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CURRENT FILING DATE: 2000-09-18
PRIOR APPLICATION NUMBER: US 08/581,662
PRIOR FILING DATE: 1995-12-29
                                                                                                                                                  TELEFAX: 914-347-2113
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/07/979,630
FILING DATE: 20-NOV-1992
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/847,369
FILING DATE: 06-MAR-1992
                                                                         TOPOLOGY: un
MOLECULE TYPE:
                                                                                                                                                                                               TELECOMMUNICATION INFORMATION TELEPHONE: 914-347-7000
                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION: NAME: Kempler Ph.D., Gai
                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
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ADDRESSEE: Regeneron Pharmaceuticals,
STREET: 777 Old Saw Mill River Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Persson, et al.
TITLE OF INVENTION: Multifunctional Neurotrophic Factors
NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                        NAME: Kempler Ph.D., Gail M.
REGISTRATION NUMBER: 32,143
REFERENCE/DOCKET NUMBER: REG 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 7// ULL
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OPERATING SYSTEM: PC-DOS/MS-DOS
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STATE: New York
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   Local Similarity
les 118; Conserv
                                                                                                                                     LENGTH:
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5, 5488099
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Pred. No.
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               Score 641; DB 1;
Pred. No. 8.9e-69;
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                             Length 119;
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                                                                                       US-08-340-131-3
Sequence 3, Application US/08340131
Patent NO. 5770577
GENERAL INFORMATION:
APPLICANT: Kinstler, Olaf B
APPLICANT: Yan, Qiao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
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Best Local Similarity
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APPLICANT: Winslow, John W.
TITLE OF INVENTION: PANTROPIC NE
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Bl
CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATA:
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: 08/2531
APPLICATION NUMBER: 08/2531
APPLICATION NUMBER: 01/2011
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                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 119 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb:
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: PO
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 03-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: Torchia, Timothy E.
REGISTRATION NUMBER: 36,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 415/2-9881
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                                                                                                                                                     61 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT 119
                                                                                                                                                                         62 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                                                                                                                                                                                                                                                                                                                                                                        TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 12-Ma
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                                                                                                                                                                                                                    PELEFAX: 415/771-7168
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                                                                                                                                                                                                                                                                                        118;
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                                                                                                                                                                                                                                                                                                                                                                                                    119 amino acids
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                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                       Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PANTROPIC NEUROTROPHIC FACTORS
                                                                                                                                                                                                                                                                                                      98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/253937
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                                                                                                                                                                                                                                                                                       Score 641; DB 1; 1
Pred. No. 8.9e-69;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                        Length 119
                                                                                                                                                                                                                                                                                        Indels
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US-08-441-513A-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2, Application US/08441513A
Patent No. 5981480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 118;
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                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Urfer, Roman
APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
FILING DATE: 435
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/253937
APPLICATION NUMBER: 08/253937
APPLICATION NUMBER: 08/253937
                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                       SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION: NAME: Mazza, Richard J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Rel CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                      APPLICATION NUMBER: US/O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 1840 Dehavilland Drive CITY: Thousand Oaks
                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Mazza, Richard J. REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/340,131 FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
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                                                                                                                                                                                                                                                                          South San Francisco
: California
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linear
                                                                                                                                                                                                                                                                                                                                  Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                                                                        Pantropic Neurotrophic Factors
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                                                                                                         US/08/441,513A
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US-08-910-691-12
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US-08-910-691-12
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Query Match
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                                                                                                       TELEFAX: (617)523-6440
TELEX: 200291 STRE UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/
APPLICATION NUMBER: 19930604
ATTORNEY/AGENT INFORMATION:
NAME: NEUNER, George W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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                                                                                                                                                     NAME: NEUNER, George W
REGISTRATION NUMBER: 26964
REFERENCE/DOCKET NUMBER: 1234
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)523-3400
TELEFAX: (617)523-6440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Torchia, PhD., Timoth:
REGISTRATION NUMBER: 36,700
REFERRINGE/DOCKET NUMBER: PO
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: WATANABE, Tats
APPLICANT: YOSHITOMI, Sun
APPLICANT: SASADA, Reiko
TITLE OF INVENTION: THERI
                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Rel CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS
ADDRESSEE: CUSHMAN
                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/910,691 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP:
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                                                                                         119 amino acids
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                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Linear
                                                                                                                                                                                                                                                                                                                                                                                                         IBM PC compatible
                                                             linear
                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                          PC-DOS/MS-DOS
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 98.2%;
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Pred. No. 8.9e-69;
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 Score 641;
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 Length 119;
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; LENGTH: 119
; TYPE: PRT
; ORGANISM: homo sapien
US-08-845-541B-2
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US-09-066-065A-2
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US-08-845-541B-2
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Hest Local Similarity 99.2%;
Matches 118; Conservation
                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/09066065A Patent No. 6365373
GENERAL INFORMATION:
APPLICANT: Leonard G. Presta, RO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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APPLICANT: Urfer, Roman
APPLICANT: Winslow, John
TITLE OF INVENTION: NGF VARIANTS
FILE REFERENCE: GENENT.039A
CURRENT APPLICATION NUMBER: US/08/845,541B
CURRENT FILING DATE: 1999-04-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 38
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/0
FILING DATE: 25-APR-1999
                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
ATTORNEY/AGENT INFORMATION:
                                                                    CLASSIFICATION: 5
                                                                                 APPLICATION NUMBER: US/09/066,065A FILING DATE: 24-Apr-1998
                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                   CITY: South San Francisco
STATE: California
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                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 60
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5. 6333310
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                                                                                                                                                                                                                                                                 California
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1 DNA Way
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VENTION: NGF Variants
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Pred. No. 8.9e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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                                                                     PCT-US93-11292-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Applicati
GENERAL INFORMATION:
 Best Local Similarity 99.7 Matches 118; Conservative
                    Query Match
Best Local
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                                                                                                                                                TELEFAX: 914-347-2113
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acid
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                                                                                                                                                                                                                                                                                                CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 06-MAR-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: PATENTIN Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: Amino Acid
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CORRESPONDENCE ADDRESS:
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                                                                                    MOLECULE TYPE:
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                                                                                                                                                                                                                                                   NAME: Kempler Ph.D., Gail M. REGISTRATION NUMBER: 32,143 REFERENCE/DOCKET NUMBER: REG
                                                                                                  STRANDEDNESS: unki
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 19-NOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT 119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Torchia, PhD., Timothy E. REGISTRATION NUMBER: 36,700
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                                                                                                                                   amino acid
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 Score 641; DB 5; Pred. No. 8.9e-69; 0; Mismatches 1;
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PCT-US95-06918-2
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PCT-US95-06918-5
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Best Local Similarity 99.2
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GENERAL INFORMATION:
                                                                                                              Sequence 5, Application PC/TUS9506918 GENERAL INFORMATION:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/06918
FILING DATE:
CLASSIFICATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acid
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CORRESPONDENCE ADDRESS: ADDRESSEE: Genentech, Inc.
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TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: TOTChia, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 905PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                             APPLICANT: Genentech, Inc.
TITLE OF INVENTION: PANTRO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
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                                                                                    PANTROPIC NEUROTROPHIC FACTORS
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Pred. No. 8.9e-69;
0; Mismatches 1
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Search completed: December Job time: 9.30012 secs
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NAME: TOTCHIA, Timothy E.

REGISTRATION NUMBER: 36,700

REFERENCE/DOCKET NUMBER: 905PO

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415/952-9881

TELEFAX: 415/952-9881

TELEEX: 910/371-7168

INFORMATION FOR SEQ ID NO: 5:

SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids

TYPEP: amino acids
                                                                                                                                                                  Query Match
Best Local Similarity 99.2
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/06
FILING DATE:
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                                                         LENGTH: 119 amino acids
TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: 5.25 inch,
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                                                                                                                94080
                                                                                                                                                                                                                                                      linear
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                  2002, 15:09:44
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                                                                                                                                                                              0; Mismatches
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Result
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1: /cgn2_6/ptcdata/1/pubpaa/US08_NEW_PUB.pep:*

2: /cgn2_6/ptcdata/1/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptcdata/1/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptcdata/1/pubpaa/US06_PUBCOMB.pep:*

5: /cgn2_6/ptcdata/1/pubpaa/US07_NEW_PUB.pep:*

6: /cgn2_6/ptcdata/1/pubpaa/US07_PUBCOMB.pep:*

7: /cgn2_6/ptcdata/1/pubpaa/US07_PUBCOMB.pep:*

8: /cgn2_6/ptcdata/1/pubpaa/US09_PUBCOMB.pep:*

9: /cgn2_6/ptcdata/1/pubpaa/US09_PUBCOMB.pep:*

10: /cgn2_6/ptcdata/1/pubpaa/US09_PUBCOMB.pep:*

11: /cgn2_6/ptcdata/1/pubpaa/US09_PUBCOMB.pep:*

12: /cgn2_6/ptcdata/1/pubpaa/US09_PUBCOMB.pep:*

13: /cgn2_6/ptcdata/1/pubpaa/US09_PUBCOMB.pep:*

14: /cgn2_6/ptcdata/1/pubpaa/US09_PUBCOMB.pep:*
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length: 2000000000
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1 PYAEHKSHRGEYSV
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Match
 BLOSUM62
Gapop 10.0 ,
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Listing first 45 summaries
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US-09-742-600-3

US-09-742-600-3

US-09-742-600-7

US-09-742-600-7

US-09-742-600-7

US-09-742-600-7

US-09-742-600-7

US-09-742-600-7

US-09-743-600-5

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US-09-873-090-5

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US-09-745-032-1
US-09-742-600-1
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ARPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120

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Best Local Similarity Matches 120; Conserv

100.0%; ilarity 100.0%; Conservative (

<u>,,</u>

Score 653; DB 12; Pred. No. 6.2e-65; ; Mismatches 0;

Indels Length

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Gaps

0

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Query Match Best Local

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 $\mathbf{L}$  ; LENGTH: 120 ; TYPE: PRT ; ORGANISM: Homo sapien US-10-072-681-5

NUMBER OF SEQ ID NO SOFTWARE: FastSEQ 1 SEQ ID NO 5 LENGTH: 120

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SSULT 1 Sequence 5, GENERAL INF APPLICANT: A		44444333333333333333333333333333333333
		373.5 375.5 375.5
ULT 1 10-072-681-5 10-072-681-5 equence 5, Application US/10072681 atent No. US20020137893A1 ENERAL INFORMATION: APPLICANT: BUTTON, LOUIS E. APPLICANT: Schmelzer, Charles H. APPLICANT: Beck, Joanne T. APPLICANT: Beck, Joanne T. CURRENT APPLICATION UMBER: US/10/0 CURRENT APPLICATION NUMBER: US/10/0 CURRENT FILING DATE: 1992-02-08 PRIOR APPLICATION NUMBER: 60/047855 PRIOR FILING DATE: 1997-05-29 PRIOR APPLICATION NUMBER: 09/363573 PRIOR FILING DATE: 1997-11-14 PRIOR APPLICATION NUMBER: 09/363573 PRIOR FILING DATE: 1999-07-29 PRIOR FILING DATE: 1999-07-5 PRIOR FILING DATE: 1909-07-5 PRIOR FILING DATE: 1909-07-5 PRIOR FILING DATE: 1090-07-5 PRIOR FILING DATE: 1090-07-5 PRIOR FILING DATE: 1090-07-5 PRIOR FILING DATE: 1090-07-5 PRIOR FILING DATE: 1000-09-2		\$55.55 \$5
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		Sequence 2, Appli Sequence 6, Appli Sequence 6, Appli Sequence 10, Appli Sequence 11, Appli Sequence 1, Appli Sequence 2, Appli Sequence 3, Appli Sequence 10, Appli Sequence 10, Appli Sequence 10, Appli Sequence 8, Appli Sequence 8, Appli Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 2, Appli Sequence 3, Appli Sequence 22, Appli Sequence 22, Appli Sequence 12, Appli Sequence 12, Appli Sequence 12, Appli Sequence 6, Appli

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APPLICANT: Hershenson, Susan I.

APPLICANT: Young, John D.

TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS

FILE REFERENCE: A-411A US Revised073100

CURRENT APPLICATION NUMBER: US/09/742,600

CURRENT FILING DATE: 2000-12-19

PRIOR APPLICATION NUMBER: 09/214,214

PRIOR FILING DATE: 1998-12-23

PRIOR APPLICATION NUMBER: US 08/684,353

PRIOR APPLICATION NUMBER: US 08/684,353

PRIOR FILING DATE: 1996-07-19

NUMBER OF SEQ ID NOS: 12

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LENGTH: 120
; TYPE: PRT
; ORGANISM: Human
US-09-745-032-1
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APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N
APPLICANT: Hershenson, Suu
APPLICANT: Young, John D
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Best Local Similarity
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                                                                                                                                                     Query Match
Best Local
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APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT EDPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
CURRENT FILING DATE: 2000-12-19
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NUMBER OF SEQ ID NOS: 12
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                                                                                                                                                                                                                                         ORGANISM: Human
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                                                                                                                                                   Local Similarity
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  RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                              YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA
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Pred. No. 1.3e-63;
0; Mismatches 1;
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Pred. No. 1.3e-63;
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Hest Local Similarity 99.2%;
Matches 118; Conservative
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PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 9
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CURRENT APPLICATION NUMBER: US/09/872,090
CURRENT FILING DATE: 2001-06-01
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APPLICANT: Young, John D.

TITLE OF INVENTION: Analogs of NT-3 (As Amended)
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                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 22-MAR-
                                                                                                                                                CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                     CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4:
FILING DATE: 19-APR-1995
                                                                                                                                                                           MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech)
                                                                                                                                                                                                                                                                                                                CITY:
STATE:
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STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
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                                                                                                                               FILING DATE:
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g, Ellen Ngoi Yin
   22-MAR-1993
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LENGTH: 119
; TYPE: PRT
; ORGANISM: Human
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Best Local Similarity
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                                                                                                                                                        Matches
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PRIOR EILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
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TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
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SOFTWARE: PatentIn Ver.
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                     62 RPVKNGCRGIDDKHWNSQCKTSQTYVRALITSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
                                                                                               2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 61
                                                                       YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 60
APVDNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT 119
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                                                                                                                                                      Conservative
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Pred. No. 2.6e-62;
0; Mismatches 3;
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RESULT 7

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2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 61

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YAEHKSHRGEYSVCDSESLWVTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 60

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APPLICANT: Boone, Thomas C.

APPLICANT: Cheung, Ellen Ngol Yin

APPLICANT: Hershenson, Susan I.

APPLICANT: Young, John D.

TITLE OF INVENTION: Analogs of NT-3 (As Amended)

FILE REFERENCE: A-411B

CURRENT APPLICATION NUMBER: US/09/872,090

CURRENT FILING DATE: 2001-06-01

PRIOR APPLICATION NUMBER: 09/255,953

PRIOR APPLICATION NUMBER: 09/684,353

PRIOR APPLICATION NUMBER: 08/684,353

PRIOR APPLICATION NUMBER: 08/684,353

PRIOR FILING DATE: 1996-07-19

NUMBER OF SEQ ID NOS: 9

NUMBER OF SEQ ID NOS: 9
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APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/742,600
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1996-12-23
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
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                                                                                                                                                                                                    SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 6
LENGTH: 119
TYPE: PRT
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      Matches
                                             Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6, Application US/09872090 Patent No. US20020052488A1
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Boone, Thomas C.
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TYPE: PRT
ORGANISM: Human
                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                                                             OTHER INFORMATION: Description of Artificial Sequence: Analog of OTHER INFORMATION: human NT-3.
                                                                                                                                                           FEATURE:
      Local Similarity
les 116; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 APVDNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIGRT 120
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nes 116; Conserv
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    Conservative
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97.5%;
                         96.3%;
97.5%;
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  Score 629; DB 10;
Pred. No. 2.6e-62;
D; Mismatches 3
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Pred. No. 2.6e-62;
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199 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIGRT 257

2 YAEHKSHRGEYSVCDSESLWYTDKSSAIDIRGHQVTVLGEIKTGNSPVKQYFYETRCKEA 61

TELEEX: 415/371-7168
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 257 amino acids
TYPE: amino acid

REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 66
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674

666P2C1D3

TELEPHONE: 41/2-9881

FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TOICH10, Timothy E

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587707

PRIOR APPLICATION DATA:

07/648482

FILING DATE: APPLICATION NUMBER:

US-08-450-842-4

Best Local Similarity Matches 118; Conserv

Conservative

98.2%; 99.2%;

Score 641; DB 8; Pred. No. 3.1e-63; 0; Mismatches 1

Length 257;

Indels

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Gaps

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Query Match Best Local (

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US-09-745-032-3
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US-09-742-600-3
                                                                                                 ; ORGANISM: Human US-09-742-600-3
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Hest Local Similarity 97.5%;
Matches 116; Conservation
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SOFTWARE: PatentIn Ver.
SEQ ID NO 3
                                                                                                                                    SEQ ID NO 3
LENGTH: 120
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Boone, Thomas C.
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APPLICANT: Cheung, Ellen N.
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
APPLICANT: Young, John D.
APPLICANT: YOUNG, JOHN D.
ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/145,032
CURRENT FILING DATE: 2000-12-19
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PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
                                 Query Match
Best Local Similarity
Matches 116; Conserv
                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/742,600 CURRENT FILING DATE: 2000-12-19 PRIOR APPLICATION NUMBER: 09/214,214 PRIOR FILING DATE: 1998-12-23 PRIOR APPLICATION NUMBER: US 08/684,353 PRIOR FILING DATE: 1996-07-19
                                                                                                                                                                                                                                                                                                                      APPLICANT: Cheung, Ellen N.
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
                                                                                                                                                                                     SOFTWARE: PatentIn Ver. 2.1
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                                  Conservative
                                                    96.3%;
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Pred. No. 2.7e-62;
                                    Score 629; DB 10;
Pred. No. 2.7e-62;
0; Mismatches 3;
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FILE REFERENCE: A-411B
CURRENT APPLICATION NUMBER: US/09/872,090
CURRENT FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: 09/255,953
PRIOR FILING DATE: 1999-02-23
PRIOR FILING DATE: 1999-02-23
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEO ID NOS: 9
NUMBER OF SEO ID NOS: 9
SOFTWARE: Patentin Ver. 2.1
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US-09-872-090-3
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                                                                                                                      APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
TITLE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
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; ORGANISM: Human US-09-745-032-7
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                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
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Best Local Similarity
                                                                  NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 7
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APPLICANT: Cheung, Ellen I
APPLICANT: Hershenson, Su
APPLICANT: Young, John D.
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ORGANISM: Artificial Sequence
FEATURE:
                                    LENGTH: 1
TYPE: PRT
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Cheung, Ellen Ngoi Yin
Hershenson, Susan I.
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97.5%;
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Pred. No. 2.7e-62;
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; LENGTH: 117
; TYPE: PRT
; ORGANISM: Human
US-09-742-600-7
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US-09-872-090-7
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APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/742,600
CURRENT FILING DATE: 2000-12-19
PRIOR APPLICATION NUMBER: 09/214,214
PRIOR APPLICATION NUMBER: 09/214,353
PRIOR FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 12
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APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N
APPLICANT: Hershenson, Sus
APPLICANT: Young, John D.
                                                                                                                                                                                                                                                                                         Sequence 7, Application US/09872090 Patent No. US20020052488A1
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Best Local Similarity
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Best Local (
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                                PRIOR APPLICATION NUMBER: 09/255,953
PRIOR FILING DATE: 1999-02-23
PRIOR APPLICATION NUMBER: 08/684,353
PRIOR FILING DATE: 1996-07-19
NUMBER OF SEQ ID NOS: 9
                                                                                                                       APPLICANT: Cheung, Ellen Ngoi Yin
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: Analogs of NT-3 (As Amended)
FILE REFERENCE: A-411B
CURRENT EPPLICATION NUMBER: US/09/872,090
CURRENT FILING DATE: 2001-06-01
SOFTWARE: PatentIn Ver. 2.1
EQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Ver. 2.1
EQ ID NO 7
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hes 114;
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                                                                                                                                                                                                                                                                                                                                                                                                    61 APVDNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIG 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94.88;
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Pred. No. 3.2e-61;
0; Mismatches 3;
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Pred. No. 3.2e-61;
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Search completed: December Job time: 5.2204 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION
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Best Local Similarity
Matches 114; Conserv
                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver. SEQ ID NO 5
                                                                                                                                                                                           Best Local Similarity 97.4 Matches 114; Conservative
                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5, Application US/09745032 Patent No. US20010027179A1
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Boone, Thomas C.
APPLICANT: Cheung, Ellen N.
APPLICANT: Hershenson, Susan I.
APPLICANT: Young, John D.
TITLE OF INVENTION: ANALOGS OF CATIONIC PROTEINS
FILE REFERENCE: A-411A US Revised073100
CURRENT APPLICATION NUMBER: US/09/745,032
CURRENT FILING DATE: 2000-12-19
                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 08/684,353 PRIOR FILING DATE: 1996-07-19 NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 09/214,214
PRIOR FILING DATE: 1998-12-23
                                                                                                                                                                                                                                                                                           LENGTH: 11
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIG 118
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                                                                                              62 RPVKNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVSALSRKIG 118
                                                                                                                           APVDNGCRGIDDKHWNSQCKTSQTYVRALTSENNKLVGWRWIRIDTSCVCALSRKIG
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                                                                                                                                                                                                            94.88;
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97.4%;
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Pred. No. 3.2e-61;
0; Mismatches 3;
                                                                                                                                                                                                            Score 619; DB 10;
Pred. No. 3.3e-61;
                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                           Length 118;
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Result
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AAB29112
AAR22465
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AAR47102
AAR22479
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Neurotrophic facto
Neurotrophic facto
Human neurotrophin
Human neutrophin-4
Human NT-4 encode
Neurotrophic facto
Neurotrophic facto
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Nerve Growth Facto	Human recombinant	Human R-metHuNT pr		igate of nei	NT-3 amino acid se		3 ¥1	rophin-3	NT-3, mouse. Mus	Human r-metHuNT-3	Mutant met-huNT-3	Human NT-3(1-119)R	Mutant huNT-3 1-11	Chimeric neurotrop		Human NT-4 encode	is mature N	en					Neurotrophic facto	Ċ	n				O			ò	enco	Neurotrophic facto

## ALIGNMENTS

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RESULT 1
AAW48890
29-MAY-1997;
15-NOV-1996;
                                                                                              Region
                                                                                                                                          Homo sapiens.
                                                                                                                                                                               Human neurotrophin-4/5.
                                                                                                                                                                                              12-OCT-1998 (first entry)
                                                                                                                                                                                                              AAW48890;
                                                                                                                                                                                                                           AAW48890 standard; Protein; 130 AA.
(GETH ) GENENTECH INC
                                    14-NOV-1997;
                                                   22-MAY-1998
                                                                  WO9821234-A2
                                                                                                                    Region
                                                                                                                                                        Neurotrophin-4/5; NT-4/5; human; purification; hydrophobic interaction chromatography.
              97US-0047855
96US-0030838
                                    97WO-US21068.
                                                                                                                     Location/Qualifiers 61..78
                                                                                               119..121
                                                                                                   /note-
                                                                               "conserved Cys-containing region involved
Cys knot motif"
                                                                                                             involved
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RESULT 2
AAB29112
XX
AAB29112
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AAC
AAB2
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AC
AAB2
XX
DT
O2-F
Huma
XX
DE
Huma
XX
Menid
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Menid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This polypeptide comprises human neurotrophin-4/5 (NT-4/5) mature polypeptide. Methods are provided for large-scale purification of neurotrophins, including NT-4/5, suitable for clinical use. A claimed method comprises: (1) separating the neurotrophin from the other proteins using a hydrophobic interaction chromatography resin (HICR); and optionally (2) separating the neurotrophin from a chemical variant by high performance cation exchange chromatography (HPCEC). The processes can also be used for purification of e.g. human nerve growth factor (NGF) (see AAW48886), mouse NGF (see AAW48887), brain-derived neurotrophic factor (see AAW48888) and neurotrophins from various undesirable misprocessed, misfolded, size, glycosylated or charge forms. They allow selective separation from variants and other molecules, and from other polypers and from variants and other molecules, and from other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
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variant(s) - using hydrophobic interaction chromatography,
optionally in combination with high performance cation exchange
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Beck
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polypeptides with high pI. The processes are applicable to starting materials from various sources, including fermentation broths or lysed bacterial or mammalian cells.
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                                                                                                US6121235-A.
                                                                                                                                                            Neutrophin; trkB; trkC; ototoxicity-related balance impairment; meniere's syndrome; myingitis; otitis media; acute vestibular neuronitis; herpes zoster oticus; labyrinthitis; middle; labyrinthe tumour; petrositis; otosclerosis; bacteria.
                                                                                                                                                                                                                                                                                                                                            AAB29112 standard; Protein; 130
                                 29-DEC-1995;
                                                                 19-SEP-2000
                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                            Human neutrophin-4/5.
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ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                          (first entry)
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                                   95US-0581662
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 698; DB 19;
Pred. No. 1.7e-71;
); Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
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                                                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                           AAR22465
                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oticus, labyrinthitis, middle or labyrinthe tumours, petrositis and otosclerosis. NT-4/5 may also be used to treat diseases induced by gram positive, gram negative and acid-fast bacteria. The present sequence is a protein used in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ototoxicity-related balance impairments include Meniere's syndrome, myringitis, otitis media, acute vestibular neuronitis, herpes zoste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to treating ototoxin-induced neuronal-related balance impairment in a mammal by administering a trkB or trkC agonist, particularly neurotrophin-4/5 (NT-4/5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Treating ototoxin-induced neuronal-related balance impairment and promoting vestibular ganglion neuron survival prior to, upon or after exposure to an ototoxin, comprises administering a trkB or trkC agonist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-618200/59
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                                                                                                                                                                          Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                            AAR22465;
                                                                                                                                                                                                                                                                                AAR22465 standard; Protein; 210
                                                                                                                                    02-APR-1992.
                                                                                                                                                       WO9205254-A.
                                                                                                                                                                                             Huntington's
                                                                                                                                                                                                                   Neurotrophic factor 4.
                                                                                                                                                                                                                                        22-SEP-1992
                                       Rosenthal
                                                           (GETH ) GENENTECH INC
                                                                                 25-SEP-1990;
31-JAN-1991;
                                                                                                               24-SEP-1991;
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                   1992-132123/16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                              chorea; ALS; NT-4;
                                                                                                                                                                                                                                        (first
                                                                                 90US-0587707
91US-0648482
                                                                                                                91WO-US06950
                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 698; DB 21;
Pred. No. 1.7e-71;
: Mismatches 0;
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RESULT 4
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence shows the entire amino acid sequence for the mature human neurotrophic factor-4 (NT-4) gene, (nucleotide sequence AAQ23663). This protein can be useful in treating damaged nerve cel or neurodegenerative diseases eg. Huntingdon's chorea, Alzhelmer's disease, ALS and Parkinson's disease.

NT-4 is a novel trophic factor with a broad tissue distribution. It complements NGF, BDNF, and NT-3, which are trophic factors for some peripheral neurons. This factor can act alone or with other trophic factors, on defined subsets of neurons to achieve the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neurotrophic factor-4 - useful for treating neuro:degenerative diseases e.g. Alzheimer's and Parkinson's diseases, nerve cells damaged by e.g. diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure;
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    WPI; 1992-132123/16
                                              Rosenthal
                                                                                  (GETH ) GENENTECH
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31-JAN-1991;
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91US-0648482
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83..83
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71..71
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RESULT 5
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The sites of greatest interest for substitutional mutagenesis include sites where the amino acids found in BDNF, NGF, NT-3, and NT-4 are substantially different in terms of side chain bulk, charge, or hydrophobicity, but where there is also a high degree of homology at the selected site within various animal analogues of NGF, NT-3 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neurotrophic factor-4 - useful for treating neuro:de diseases e.g. Alzhelmer's and Parkinson's diseases, damaged by e.g. diabetes
                                                                                                                                                                                                                                         Homo
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                                                                                                                                                                                                                                                                                                                                             AAY92009;
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                       Misc-difference
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129; Conserv
                                                                                                                                                                                                                                                                        neurotrophin-3 monomer;
                                                                                                                                                                                                                                                                                              neurotrophin-4 monomer
                                                                                                                                                                                                                                                             loop;
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                                "mutant options
substitutions
                                                                                       "optionally mutated interaction between
                                                                                                                          "mutant optionally comprises substitutions in these residuals."
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"optionally mutated to increase electrostatic interaction between beta hairpin structure a
                                          mutant optionally co
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Pred. No. 8.9e-71
0; Mismatches
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n beta hairpin structure a
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Best Local Sim
Matches 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutants comprise at least one electrostatic charge altering mutation in a beta hairpin loop, resulting in increased bloactivity.

Mutant cystine knot growth factor (CKGF) proteins comprising one or more mutant subunits and having novel properties or improved pharmacological properties, compared to wild type CKGFs, are claimed. The CKGF superfamily comprises at least four families of growth factors: the glycoprotein hormones, the platelet-derived growth factor (PDGF) family, the neurotrophins and the transforming growth factor-beta family; the families are known to be structurally similar (especially comprising the cystines in the CKGF hairpin loops of family members and other members of the CKGF superfamily could significantly alter the biological activities of the CKGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New mutant cystine knot growth factor proteins comprising or mutant subunits, useful for treating or preventing diseases
                                   stress
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothyroidism and thyroid cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-MAR-2000
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                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                   neurodegenerative diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                Mutant neurotrophins are useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Weintraub BD,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-MAR-1999;
                                                                      Human
                                                                                              18-MAY-1993
                                                                                                                     AAR30691;
                                                                                                                                             AAR30691 standard;
                                                                                                                                                                                                       121
                                                                                                                                                                                                                             121
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                                                                                                                                                                                                                                                                                                                         μ
                                                                                                                                                                                                                                                  CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                                                                                                2000-283585/24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                is the wild type human neurotrophin-4 monomer.
                                                                                                                                                                                                       CTLLSRTGRA 130
                                                                                                                                                                                                                             CTLLSRTGRA 130
                                                                      neutrophin-4
                                  protector protein; protection; toxic shock; stress;
susceptibility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNIV
                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 300;
                                                                                                                                                                                                                                                                                                                                                                                              130 AA;
                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MARYLAND BALTIMORE
                                                                                              (first
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                                                                                                                                             Protein;
                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                           98.78;
99.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        320pp; English.
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Pred.
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                                                                                                                                                                                                                                                                                                                                                           No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                diagnosis
                                                                                                                                                                                                                                                                                                                                                           DB 21;
.8e-70;
                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                 treatment of
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Best Local 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           comprises agent and
                                 Neurotrophin-4; NT-4; viper; Xenopus; rat; human; nerve growth factor; brain-derived neurotrophin factor; BDNF; NGF; acute neuropraxia; NT-3; gene family; survival; growth; differentiation; neuron; cholinergic; basal forebrain; cholinergic neuron; dopaminergic; neuron disease; peripheral neuropathy; hippocampus; striatum; neurotmesis; atoxmesis; diabetic neuropathy; amyotrophic lateral sclerosis; compression; tumour; abscess; trauma; Alzheimer's disease; parkinson's disease; retina; retinal ganglion cell degeneration; antibody; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
Region
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21-NOV-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-JUN-1992;
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                                                                                                                                                Human NT-4 encode by genomic phage clone 7-2.
                                                                                                                                                                                                                          AAR47102 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        investigation.
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                                                                                                                                                                         21-JUN-1994
                                                                                                                                                                                                 AAR47102;
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                                                                                                                                                                                                                                                                                                                                                                                  86 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  his sequence
s fused to Lar
ne protein is
                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                              1 GVSETAPASRRGELAVCDAVSGWYTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
                                                                                                                                                                                                                                                                                   1 CTLLSRTGRA 130
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6 CTLLSRTGRA 215
                                                                                                                                                                                                                                                                                                                                               CKADNAEEGGFGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                                                                                                                                  CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV
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                                                                                                                                                                                                                                                                                                                                                                                                                                  129;
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR30690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGENERON PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of recombinant biologically active neurotrophin(s) -s solubilising protein in soln. contg. strong denatured free of reducing agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Panayotatos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   215 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is newly
                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    represents human neurotrophin 4. The coding sequence amB signal sequences to enable its recombinant produc s newly discovered and its biological role under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91US-0715185
91US-0796106
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81..83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= N-glycosylation concensus sequence 84.85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label- predicted preprotein cleavage site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   164pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                            98.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 689; DB 14;
Pred. No. 3.4e-70;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contg. strong denaturing
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 215;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   production.
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RESULT 8
AAR22477
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                                                                                                                                                                                                                                                                                                                                                    The sequences given in AAR47095-104 represent neurotrophin-4 (NT-4), CC fragments and derivatives of NT-4, and were derived from viper, CC Xenopus, rat and human. NT-4 is a member of the brain-derived neurotrophin factor (BNF)/nerve growth factor (NGF)/NT-3 gene family.

CC NT-4 proteins can promote the survival, growth and differentiation of neurons, such as basal forebrain cholinergic neurons. NT-4 proteins can be used to treat dopaminergic or cholinergic neuron of diseases and disorders. NT-4 related proteins may be used to treat peripheral neuropathy and diseases of the hippocampus and striatum. Disorders which may be treated in this way, include acute neuropraxia, neurotmesis, atoxmesis, diabetic neuropathy, amyotrophic lateral sclerosis or compression, a tumour, abscess, trauma, Alzheimer's disease, parkinson's disease or a disorder of the retina, especially convolving retinal gangilon cell degeneration. Anti-NT-4 antibodies may be used for diagnostic or therapeutic purposes, eg. to monitor the progression of diseases associated with alterations in the pattern of
                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Neuro:trophin-4-proteins which support survival, growth and differentiation of motor neurons - used to treat motor neuron disorders e.g. dopaminergic and cholinergic neuron diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wong
                                                                                                            AAR22477 standard; Protein; 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-JUN-1993;
                   homology; activity
                               NT-4;
                                                 Neurotrophic
                                                                      22-SEP-1992
                                                                                          AAR22477;
                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 145; 181pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (REGE-) REGENERON PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-JUN-1992;
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                                                                                                                                                                                                                                                      1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
                                                                                                                                                                                                    CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                                expression.
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DB; AAQ54715.
                                                                                                                                                               CTLLSRTGRA 215
                                                                                                                                                                                                                                           GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CA,
                             NGF; NT-3; BDNF; varient;
                                                                                                                                                                                                                                                                                     129;
                                                                                                                                                                                                                                                                                             Similarity
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                                                                                                                                                                                                                                                                                                                            215 AA;
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                                                factor 4 activity varients.
                                                                    (first
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                                                                    entry)
                                                                                                                                                                                                                                                                                             98.7%;
99.2%;
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                                                                                                                                                                                                                                                                                  Score 689; DB 15;
Pred. No. 3.4e-70;
0; Mismatches 1
                             deletion;
                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ventimiglia R,
                            tertiary structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wiegand
                                                                                                                                                                                                                                                                                                     Length 215;
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RESULT 9
AAR22479
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                                                                                                                                                                                   AAR22479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neurotrophic factor-4 - useful for treating neuro:degenerative diseases e.g. Alzheimer's and Parkinson's diseases, nerve cells damaged by e.g. diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-SEP-1990;
31-JAN-1991;
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Synthetic
                                                  NT-4; NGF;
                                                                                Neurotrophic
                                                                                                                   22-SEP-1992
                                                                                                                                                     AAR22479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
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                               homology;
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                                                                                                                                                                                                                                                                         121
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                                                                                                                                                                                   standard; Protein; 130
                                 activity
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                                                  NT-3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           130 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                factor 4 activity varients.
                                                                                                                  (first entry)
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91US-0648482.
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                                                                                                                                                                                                                                                                       130
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                                                 BDNF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label- HIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98.0%;
                                                 varient;
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Pred. No. 6.8e-70;
0; Mismatches 2;
                                                 deletion;
                                                 tertiary
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                                                 structure;
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Key

Location/Qualifiers

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RESULT 10
AAR22471
ID AAR22
XX AAR22
XX AAR22
XX Veurc
XX Neurc
XX NT-4;
XX NT-4;
XX Homo
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Best Local Similarity
Matches 128; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence shows an NT-4 varient protein, in which the Phe residue at position 188 of NT-4 (sequence given in ARR2245), is replaced by a His residue. This corresponds to position 108 of the mature NT-4 protein. The sites of greatest interest for substitutional mutagenesis include sites where the amino acids found in BDNF, NGF, NT-3, and NT-4 are substantially different in terms of side chain bulk, charge or hydrophobicity, but where there is also a high degree of homology at the selected site within various animal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neurotrophic factor-4 - useful for treating neuro:degenerative diseases e.g. Alzheimer's and Parkinson's diseases, nerve cells damaged by e.g. diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-SEP-1990;
31-JAN-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1992-132123/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-SEP-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9205254-A
                                                                                                                                                                                                                                         AAR22471 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               analogues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC
               W09205254-A
                                                        Misc-difference
                                                                                                                                                      Neurotrophic
                                                                                                                                                                                  22-SEP-1992
                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                        \mathbf{L}
                                                                                                                                                                                                                                                                                                                                                                                                                                                    _
                                                                                                                                                                                                                                                                                                                                                                                CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                      GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
                                                                                                                                                                                                                                                                                                                                    CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                                                                                                        GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
                                                                                                                                                                                                                                                                                                            CTLLSRTGRA
                                                                                                                                                                                                                                                                                                                                                                 CKADNAEEGGPGAGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRFGWRWIRIDTACV
                                                                                               sapiens
                                                                                                                           NT-3; BDNF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of BDNF, NGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq 61; 84pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                        factor 4 variants
                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90US-0587707.
91US-0648482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91WO-US06950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108..108
/label=
                                                                                                                                                                                                                                                                                                               130
                                       Location/Qualifiers 67..67 /label= SER, THR
                                                                                                                            NGF;
                                                                                                                                                                                                                                          Protein; 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                            mutagenesis; substitution; non-conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NT-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 684; DB Pred. No. 6.8e 0; Mismatches
                                                                                                                                                      (E67).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13;
5.8e-70;
hes 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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RESULT 11
AAR22480
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                                                                                                                                                                                                                                                                                      20
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                    Matches 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Either Ser or Thr may be included at this point. This substitution changes an acidic amino acid for a hydrophillicly neutral one. The sites of greatest interest for substitutional mutagenesis include sites where the amino acids found in BDNF, NGF, NT-3, and NT-4 are substantially different in terms of side chain bulk, charge, or hydrophobicity, but where there is also a high degree of homology at the selected site within various animal analogues of NGF, NT-3 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence shows a portion of the amino acid sequence of human neurotrophic factor-4 (NT-4), (full sequence AAR22465). Position is a point of a non-conservative substitution which can cause a marked differentiation in the activity of the trophic element.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-SEP-1990;
31-JAN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diseases e.g. Alzheimer's and damaged by e.g. diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Neurotrophic
diseases e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1992-132123/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosenthal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-SEP-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-APR-1992.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure;
                                                                                                                                                                                      AAR22480;
           02-APR-1992
                                                                Misc-difference
                                                                                                                      NT-4; NT-3;
                                                                                                                                            Neurotrophic factor 4 activity varients.
                                                                                                                                                                22-SEP-1992
                                                                                                                                                                                                            AAR22480 standard;
                               WO9205254-A
                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                        121 CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                            CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 45-46; 84pp;
                                                                                                                       BDNF;
                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    factor-4 - useful for treating neuro:degenerative
. Alzheimer's and Parkinson's diseases, nerve cells
                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90US-0587707
91US-0648482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91WO-US06950
                                                                 84.
                                                      /label=
                                                                        Location/Qualifiers
                                                                                                                        NGF;
                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                               97.9%;
                                                                                                                       mutagenesis; substitution.
                                                      GLN, HIS, ASN,
                                                                                                                                                                                                                130
                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                    Score 683; DB 13;
Pred. No. 8.9e-70;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                        THR,
                                                        TYR,
                                                        TRP
                                                                                                                                                                                                                                                                                                                                                                                                                          Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Position
                                                                                                                                                                                                                                                                                                                                                                                                         0
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AAR29735
ID AAR29735
XX AAR29736
AC AAR29
XX LID AAR29
XX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 128; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequence shows a portion of the amino acid sequence of human neurotrophic factor-4 (NT-4), (full sequence ARR22465). Position 84 is a point at which substitution mutation causes a marked differentiation in the activity of the trophic element. Either Gln, His, Asn, Thr, Tyr or Trp may be included at this point. The sites of greatest interest for substitutional mutagenesis include sites where the amino acids found in BDNF, NCF, NT-3, and NT-4 are substantially different in terms of side chain bulk, charge, or hydrophobicity, but where there is also a high degree of homology at the selelcted site within various animal analogues of NGF, NT-3 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Neurotrophic factor-4 - useful for treating neuro:degenerative diseases e.g. Alzheimer's and Parkinson's diseases, nerve cells damaged by e.g. diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Seq 62-67; 84pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                            Misc-difference
                                                                                                                                       Misc-difference
                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                        brain-derived
                                                                                                                                                                                                                                                                                                                                                                            Human NT-4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR29735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR29735 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-SEP-1990;
31-JAN-1991;
  Misc-difference
                                              Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                            22-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rosenthal A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                  Neurotrophin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-SEP-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1992-132123/16.
                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CKADNAEEGGPGAGGGCRGVDRXHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                              encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                                                                        NT; nerve growth factor; NGF; neurotrophic factor; BDNF; pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹
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91US-0648482.
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/note=
                                           /note-
48..51
                                                                                                                                                                                             Location/Qualifiers
                                                                                                                  /note=
                                                                                                                                                                /note-
                                                                                                                                                                                                                                                                                                                                                                            by clone
                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97.9%;
                                                                 "conserved residue
                                                                                                                                                             "conserved residue
                        "conserved
                                                                                                                  "conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 683; DB 13;
Pred. No. 8.9e-70;
0; Mismatches 2;
                        residues
                                                                                                               residue
                                                                                                                                                                                                                                                                                                     probe;
                                                                 'n
                                                                                                                                                             'n
                                                                                                               'n
                     in
                                                               presequence"
                                                                                                                                                           presequence"
                                                                                                             presequence"
                   presequence'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ب</u>
                                                                                                                                                                                                                                                                                                     primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
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RESULT 13
AAR22481
ID AAR22
XX
AC AAR22
XX
AC AAR22
XX
DE Neuro
XX
NT-4;
XX
OS Homo
XX
FH Key
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                                                                                                                                                                                                                                                                                      Query Match
Best Local 9
                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-MAY-1991;
12-JUL-1991;
23-JUL-1991;
28-AUG-1991;
20-SEP-1991;
14-NOV-1991;
                                                                                                                                                                                                                                                                                                                                             Oligonucleotide probes and family including NGF, BDNF encoding NT-4 from nucleic then used to isolate other
                                                                                                                                                                                                                                                                                                                                                                                                                        Use of neurotrophin-4 for promoting growth and survival cells - useful in treating neurological, fertility and
                                                                                                                 AAR22481 standard;
                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 117-119 + Fig 18; 180pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9220365-A
                                                                                              AAR22481;
                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hallbook F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
                                                       Neurotrophic factor 4 activity varients
                                                                           22-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (REGE-) REGENERON PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-may-1992;
                                                                                                                                                                                                     146
                                                                                                                                                                                                                                                                                                                                                                                                               immunological disorders and in diagnosis
                                                                                                                                                                 206
                                                                                                                                                                                   121
                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                         86
                                                                                                                                                                                                                                       Local Similarity
es 128; Conserv
                                                                                                                                                                          CTLLSRTGRA 130
                                                                                                                                                                                                             CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1992-415468/50.
DB; AAQ32230.
                   sapiens
                                                                                                                                                                CTLLSRTGRA
                                                                                                                                                                                                    CKADNAEEGGPGAGGGGCRGVDRSHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV
                                     NT-3;
                                                                                                                                                                                                                                                                                                                                       NT - 4
                                                                                                                                                                                                                                                                                                                    215
                                                                                                                                                                                                                                                                                                                                       DNA.
                                                                                                                                                                                                                                                                               Conservative
                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ibanez Moliner
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91US-0729253.
91US-0734422.
91US-0751356.
91US-0762674.
91US-0791924.
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81..83
/label=
84..85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note=
                                                                                                                                                                215
Location/Qualifiers
                                    NGF;
                                                                                                                 Protein; 130
                                                                                                                                                                                                                                                                                       97.98;
                                     mutagenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-glycosylation_site
                                                                                                                                                                                                                                                                                                                                             primers were synthesised based on the NT and NT-3. These were used to isolate DNA acid from Xenopus ovaries. This DNA was mammalian DNA encoding NT-4, including
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÇF,
                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                              Score 683; DB 13;
Pred. No. 1.6e-69;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Persson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             residue in presequence
                                      substitution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HB,
                                                                                                                                                                                                                                                                                                                                                                                             English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yancopoulos
                                                                                                                                                                                                                                                                                                Length 215;
                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                   of.
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                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                         145
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RESULT 14
AAR22470
ID AAR22
XX
AC AAR22
XX
DT 22-SE
DT 22-SE
DX
XX
NT-4;
XX
NT-4;
XX
HOMO
XX
FH Key
FT Misc.
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence shows a portion of the amino acid sequence of human neurotrophic factor-4 (NT-4), (full sequence AAR22465). Position 116 is a point at which substitution mutation causes a marked differentiation in the activity of the trophic element. Either Glu, Asn, Gln, Tyr, Ser or Thr may be included at this point. The sites of greatest interest for substitutional mutagenesis include sites where the amino acids found in BDNF, NGF, NT-3, and NT-4 are substantially different in terms of side chain bulk, charge, or hydrophobicity, but where there is also a high degree of homology at the selected site within various animal analogues of NGF, NT-3 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Seq 68-73; 84pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         damaged by e.g. diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-SEP-1990;
31-JAN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-APR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Misc-difference
                                                                                                                                                                                   AAR22470 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neurotrophic factor 4 - useful for treating neuro:degenerative diseases e.g. Alzhelmer's and Parkinson's diseases, nerve cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosenthal A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-SEP-1991;
                        Misc-difference
                                                                                      NT-4;
                                                                                                           Neurotrophic
                                                                                                                                     22-SEP-1992
                                                                                                                                                            AAR22470;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC
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                                                                                                                                                                                                                                                                                                                                                                       ب
                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                              CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                               GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1992-132123/16
                                                                                                                                                                                                                                                                       CTLLSRTGRA 130
                                                                                    NT - 3;
                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                               130 AA;
                                                                                      BDNF;
                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                           factor 4 variants
                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90US-0587707.
91US-0648482.
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                        Location/Qualifiers 85..85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note=
            /label- GLU,
                                                                                    NGF;
                                                                                                                                                                                     Protein; 130
                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                           97.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "GLU, ASN, GLN,
                                                                                    mutagenesis;
                                                                                                                                                                                                                                                                                                                                                                                               0:
                                                                                                                                                                                                                                                                                                                                                                                              Score 682; DB 13;
Pred. No. 1.2e-69;
0; Mismatches 2;
            PHE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English.
                                                                                                          (R85).
                                                                                                                                                                                     A
           PRO,
                                                                                      substitution
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            TYR,
                                                                                                                                                                                                                                                                                                                                                                                                                     Length 130;
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RESULT 15
AAR22469
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Best Local Similarity
Matches 128; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence shows a portion of the amino acid sequence of human neurotrophic factor-4 (NT-4), (full sequence ARR22465). Position 85 is a point at which substitution mutation causes a marked differentiation in the activity of the trophic element. Either Glu, phe, Pro, Tyr or Trp may be included at this point. The sites of greatest interest for substitutional mutagenesis include sites where the amino acids found in BDNF, NGF, NT-3, and NT-4 are substantially different in terms of side chain bulk, charge, or hydrophobicity, but where there is also a high degree of homology at the selected site within various animal analogues of NGF, NT-3 and BDNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Neurotrophic factor-4 - useful for treating neuro:d diseases e.g. Alzheimer's and Parkinson's diseases, damaged by e.g. diabetes
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-SEP-1990;
31-JAN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 43; 84pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-SEP-1991;
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                                                                             Homo
                                                                                                                                                                                   AAR22469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GETH ) GENENTECH
WO9205254-A
                                                                                                     NT-4; NT-3;
                                                                                                                              Neurotrophic factor 4 variants (G78).
                                                                                                                                                          22-SEP-1992
                                                                                                                                                                                                           AAR22469 standard;
                                       Misc-difference
                                                                                                                                                                                                                                                                            121
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                                                                             sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          130 AA;
                                                                                                       BDNF;
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                                                                                                                                                          (first
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91US-0648482
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                                   Location/Qualifiers 78..78
                          /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INC
                                                                                                       NGF;
                                                                                                                                                                                                             Protein;
                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  97.4%;
                                                                                                       mutagenesis; substitution
                          LYS,
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 680; DB Pred. No. 2e-6 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                           HIS, GLN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.
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2e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
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                                                                                                                                                                                                                                                                                                                                                                                                                                        2
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Search completed: December Job time: 25.9086 secs
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                                                                                                                                                                                                                                                                                          Query Match 97.1
Best Local Similarity 98.9
Matches 128; Conservative
                                                                                                                                                                                                                                                                                                              The sequence shows a portion of the amino acid sequence of human neurotrophic factor-4 (NT-4), (full sequence AAR22465). Position 78 is a point at which substitution mutation causes a marked differentiation in the activity of the trophic element. Either Lys, His, Gln, or Arg may be included at this point. The sites of greatest interest for substitutional mutagenesis include sites where the amino acids found in BDNF, NGF, NT-3, and NT-4 are substantially different in terms of side chain bulk, charge, or hydrophobicity, but where there is also a high degree of homology at the selected site within various animal analogues of NGF, NT-3 and BDNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Neurotrophic factor-4 - useful for treating neuro:degenerative diseases e.g. Alzheimer's and Parkinson's diseases, nerve cells damaged by e.g. diabetes
                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1992-132123/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 40-41; 84pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rosenthal A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-SEP-1990;
31-JAN-1991;
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                                                                                                                                                                    1 CTLLSRTGRA 130
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1 CTLLSRTGRA 130
                                                                                                             CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                                                                                         130 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90US-0587707.
91US-0648482.
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                                                                                                                                                                                                                                            97.1%;
98.5%;
             2
             2002, 15:08:40
                                                                                                                                                                                                                             Score 678; DB 13;
Pred. No. 3.3e-69;
0; Mismatches 2;
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Result
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw model
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
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seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-072-681-6
698
1 GVSETAPASRRGEL
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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Maximum Match 100%
Listing first 45 s
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                                     2, 2002, 15:05:43; Search time 10.3634 Seconds
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Compugen Ltd
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brain-derived neur
beta-nerve growth
nerve growth facto
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hippocampus-derive
brain-derived neur
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
72	72.5	72.5	73.5	74.5	76.5	76.5	79.5	80	80.5	80.5	83	90	228.5	241.5	255
10.3	10.4	10.4	10.5	10.7	11.0	11.0	11.4	11.5	11.5	11.5	11.9	12.9	32.7	34.6	36.5
894	940	625	6260	577	1530	860	372	622	1507	1070	949	992	286	194	246
N	N	N	N	N	N	Н	N	N	N	N	N	N	N	N	N
C86756	T01854	S13919	T30228	B87010	<b>I45944</b>	EAMS	H70595	JC5425	A40228	T31332	JC7802	T08772	S50855	151709	A59218
	hypothetical prote	potassium channel	polyketide synthas	probable isochoris	neurexin I-alpha -	elastin precursor	probable entC prot	transcription init	neurexin I-alpha p	nuclease - Aeromon	Orb protein - mous	hypothetical prote	neurotrophin-6 - s	nerve growth facto	nerve growth facto

## ALIGNMENTS

C;Species: Homo sapiens (man)
C;Date: 31-Dec-1993 #sequence\_revision 31-Dec-1993 #text\_change 16-Jul-1999
C;Accession: A42687; JH0503
R;IP, N.Y; Ibanez, C.F.; Nye, S.H.; McClain, J.; Jones, P.F.; Gies, D.R.; Belluscio, Proc. Natl. Acad. Sci. U.S.A. 89, 3060-3064, 1992
A;Title: Mammalian neurotrophin-4: structure, chromosomal localization, tissue distri A;Reference number: A42687; MUID:92212967; PMID:1313578
A;Accession: A42687

neurotrophin-4 precursor - human N; Alternate names: neurotrophin-5

A; Molecule type: DNA
A; Residues: 1-210 <IP1>
A; Residues: 1-210 <IP1>
A; Cross-references: GB: M86528; NID:g190264; PIDN: AAA60154.1; PID:g190265
A; Note: sequence extracted from NCBI backbone (NCBIN:93810, NCBIP:93811)
A; Note: sequence extracted from NCBI backbone (NCBIN:93810, NCBIP:93811)

D.V.; Rosenth

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C;Keywords: glycoprotein
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-80/Domain: propeptide #status predicted <PRO>
F;81-210/Product: neurotrophin-4 #status predicted <NEU>
F;76/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-210 <BER>
C;Comment: The neurotrophins stimulate autophosphorylation
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GDB:134723; OMIM:162662
A;Map position: 19pter-19qter
C:Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Berkemeler, L.R.; Winslow, J.W.; Kaplan, D.R.; Nikolics, K.; Goeddel, D.V.; Ros Neuron 7, 857-866, 1991
Neuron 7, 857-866, 1991
A;Title: Neurotrophin-5: a novel neurotrophic factor that activates trk and trkB. A;Reference number: JH0503; MUID:92075279; PMID:1742028
A;Accession: JH0503
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                                                                                                                                                                                                                                                             Matches
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Best Local
                                                                                    141
  201
                                      121 CTLLSRTGRA 130
                                                                                                                             61
                                                                                                                                                                        81
                                                                                                                                                                                             GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
                                                                                                        CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                    GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 140
CTLLSRTGRA
                                                                                  CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV
                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                           Conservative
210
                                                                                                                                                                                                                                                                               98.7%;
99.2%;
                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                               Score 689; DB 2
pred. No. 1e-59;
                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                    2;
                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                 Length 210
                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and transduce signals thro
                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                        Gaps
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A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 1-176, 'P', 178-209 <BER1>
A; Residues: 1-176, 'P', 178-209 <BER1>
A; Cross-references: GB:S69323; NID:g240025; PIDN:AAB20548.1; PID:g240026
C; Comment: This protein is a targed-derived, diffusible neurotrophic fact
C; Comment: The neurotrophins stimulate autophosphorylation and transduce
C; Comment: The neurotrophins stimulate achain
C; Keywords: glycoprotein
C; Keywords: glycoprotein
C; Keywords: glycoprotein
C; Keywords: signal sequence #status predicted <SIG>
F; 21-79/Domain: propeptide #status predicted <PRO>
F; 20-209/product: neurotrophin-5 #status predicted <NEU>
F; 75/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:M86742; NID:g205775; PIDN:AAA41728.1; R;Berkemeier, L.R.; Winslow, J.W.; Kaplan, D.R.; Nikolics, K. Neuron 7, 857-866, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 16-Jul-1999 (;Accession: B42687; JH0504; JH0504; JH0505 | G;Accession: B42687; JH0504; JH0505 | R:IP, N.Y.; Ibanez, C.F.; Nye, S.H.; McClain, J.; Jones, P.F.; Gies, D.R.; Belluscio, Proc. Natl. Acad. Sci. U.S.A. 89, 3060-3064, 1992 | Proc. Natl. Acad. Sci. U.S.A. 89, 3060-3064, 1992 | A;Title: Mammalian neurotrophin-4: structure, chromosomal localization, tissue distril A;Reference number: A42687; MUID:92212967; PMID:1313578 | A;Accession: B42687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Neurotrophin-5: a novel neurotrophic factor that A;Reference number: JH0503; MUID:92075279; PMID:1742028 A;Accession: JH0504
A; Reference number: JH0400; MUID:9122573; PMID:2025430
A; Accession: JH0400
A; Molecule type: DNA
A; Residues: 1-236 <HAL>
A; Residues: 1-236 <HAL>
A; Cross references: GB:330090; NID:945533; PIDN:CAA82906.1;
C; Comment: This protein belongs to the nerve growth factor factor superfamily: nerve growth factor beta chain
C; Superfamily: nerve growth factor beta chain
C; Keywords: 91ycoprotein
F;1-18/Domain: signal sequence #status predicted <NAT>
F;114-236/Product: neurotrophin-4 #status predicted <NAT>
                                                                                                                                                                                                                                                                                                                                                               neurotrophin-4 precursor - African clawed frog

C;Species: Xenopus laevis (African clawed frog)

C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 16-Jul-1999

C;Accession: JH0400

R;Hallboeoek, F.; Ibanez, C.F.; Persson, H.

Neuron 6, 845-858, 1991
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A; Residues: 1-209 <BER>
A; Accession: JH0505
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A; Residues: 1-209 <IPA>
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                                                                                                                                                                                                                                                                                                                   A; Title: Evolutionary studies of the nerve growth factor family A; Reference number: JH0400; MUID:91222573; PMID:2025430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CKAESAGEGGPGVGGGGCRGVDRRHWLSECKAKQSYVRALTADSQGRVGWRWIRIDTACV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
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:
                                                                                                                                                                       family
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                                                                                                                                                                                                 PID: 9455534
                                                                                                                                                                                                                                                                                                                                                        reveal a novel member
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C;Species: Homo sapiens (man)
C;Date: 03-Apr-1992 #sequence_revision 30-Sep-1993 #text_change 16-Jul-1999
C;Accession: A36208; JH0141; C40304; S10719; C60536
R;Jones, K.R.; Reichardt, L.F.
Proc. Natl. Acad. Sci. U.S.A. 87, 8060-8064, 1990
A;Title: Molecular cloning of a human gene that is a member of the nerve groat; Molecular cloning of a human gene that is a member of the nerve groat; Reference number: A36208; MUID:91045937; PMID:2236018
A;Accession: A36208
                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-257 <KRI>
A; Cross-references: GB: X53655; NID: 9287794; PIDN: CAA37703.1; PID: 9287795
A; Cross-references: GB: X53655; NID: 9287794; PIDN: CAA37703.1; PID: 9287795
A; Zancopoulos, G.D.; Maisonpierre, P.C.; Ip, N.Y.; Aldrich, T.H.; Belluscio, Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990
A; Title: Neurotrophic factors, their receptors, and the signal transduction A; Reference number: A60336; MUID: 92111157; PMID: 1966766
A; Accession: C60536
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; No. lecule type: DNA
A; Residues: 1-257 < JON>
A; Residues: 1-257 < JON>
A; Cross-references: GB: M37763; NID: g189300;
R: Rosenthal, A.; Goeddel, D.V.; Nguyen, T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neurotrophin-3 precursor - human
N;Alternate names: nerve growth factor 2; NGF-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Primary structure and biological activity of a novel A;Reference number: JH0141; MUID:90262727; PMID:2344409 A;Accession: JH0141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Rosenthal, A.; Goequer
Nauron 4, 767-773, 1990
  C; Superfamily: nerve grow
C; Keywords: glycoprotein
F; 1-18/Domain: signal sec
F; 19-138/Domain: propepti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Cloning and expression of a cDNA encoding a novel human neurotrophic factor. A;Reference number: S10719; MUID:90306351; PMID:2365067 A;Accession: S10719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Human and rat brain-derived neurotrophic A;Reference number: A40304; MUID:91365361; PMID:18 A;Accession: C40304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R; Maisonpierre, P.C.; Le Beau, M.M.; Genomics 10, 558-568, 1991
                                                                                                                            A;Gene: GDB:NTF3
A;Cross-references:
                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-73,'Q',75-77,'R',79-108,'T',110-257
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A; Residues: 1-257 <MAI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-257 <ROS>
                                                                                                 A; Map position: 12p13-12p13
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                                                                         Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                        Status: not compared with conceptual translation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             176
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLSRTGR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08;
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30; Conservative
ignal sequence #status predicted <SIG>
propeptide #status predicted <PRO>
                                                                                                                                 GDB:125917;
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63.0%;
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                                                                                                                                 OMIM:162660
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Pred. No. 5.1e-33;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           trophic factor and PMID:1889806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIDN:AAA59953.1;
Lewis, M.; Shih,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIDN: AAA63231.1;
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A.; Laramee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PID:g189303
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neurotrophin-3 precursor - mouse
C:Speckes: Mus musculus (house mouse)
C:Date: 30-Jun-1992 #sequence_revision
C:Accession: S09155; S51179
R:Hohn, A.; Leibrock, J.; Bailey, K.; E
Nature 344, 339-341, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Seq. 3, 49-54, 1992
A;TILle: Gene sequences of chicken BDNF and NT-3.
A;Reference number: I50400; MUID:93091238; PMID:1
A;Accession: I50400
A;Accession: I50400
                                                                                                    RESULT
S09155
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C;Superfamily: nerve growth factor beta chain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Gallus gallus (chicken)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C;Accession: I50400; 54227
R;Malsonpierre, P.C.; Belluscio, L.; Conover, J.C.; Yancopoulos, G.D.
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A; Residues: 32-257 <HAL>
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DNA Seq. 3, 49-54, 1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary
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Best Local
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                                                                                                                                                                                                                                                                                                                            SRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETTRCKADNAEE 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACVCTLLSRTG 128
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Pred. No. 1.9e-27
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Pred. No. 1.9e-27;
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                                                30-Jun-1992 #text_change
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A;CLOSS-references: GB:X53257; NID:g53451; PIDN:CAA37348.1; P:R;KOlbeck, R.; Jungbluth, S.; Barde, Y.A.

Eur. J. Blochem. 225, 995-1003, 1994

A;Title: Characterisation of neurotrophin dimers and monomers.

A;Reference number: S51179; MUID:95045576; PMID:7957235

A;Accession: S51179
                                                                                                                                                                                                                                               A;Cross references: GB.M34643
R;Maisonpierre, P.C.; Belluscio, L.; Squinto, S.; Ip, N.Y. Science 247, 1446-1451, 1990
A;Title: Neurotrophin-3: a neurotrophic factor related to A;Reference number: A40094; MUID:90208301; PMID:2321006
A;Accession: A40094
                                                                                                                                                                                                                                                                                                                                                                                                                                               RiErnfors, P.; Ibanez, C.F.; Ebendal, T.; Olson, L.; Persson Proc. Natl. Acad. Sci. U.S.A. 87, 5454-5488, 1990 A;Title: Molecular cloning and neurotrophic activities of a A;Reference number: A35781; MUID:90319130; PMID:2164684 A;Accession: A35781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Keywords: glycoprotein
F;1-18/Domain: signal sequence #status predicted <SIG>
F;140-258/Product: neurotrophin-3 #status predicted <MAT>
F;131/Binding site: carbohydrate (Asn) (covalent) #status
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                                                                                                                                    A;Cross-references: GB:M33968; NID:g205771; PIDN:AAA41727.1; C;Superfamily: nerve growth factor beta chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N;Alternate names: neurotrophin-3 precursor C;Species: Rattus norvegicus (Norway rat) C;Date: 05-0ct-1990 #sequence_revision 05-0
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A35781
hippocampus-derived neurotrophic factor precursor -
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A;Accession: S09155
A;Status: not compared with conceptual translation
                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 25-282 <MAI>
                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
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C; Keywords: glycoprotein
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A; Residues: 1-258 <HOH>
                                                                                                                                                                                                                          A; Status: preliminary
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  SRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETRCKADNAEE 68
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67; Conser
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                                             Score 358; DB 2;
Pred. No. 2.1e-27;
8; Mismatches 28;
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                                                                                     Length 282
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A:Title: Primary structure and biological activity of human A:Title: Primary structure and biological activity of human A:Reference number: A61115; MUID:91339743; PMID:1874171 A; Accession: A61115

A; Accession: A61115

A; Accession: A61115

A; Accession: A61115

A; Residues: 1-65, M',67-247 <ROS>
A; Residues: 1-65, M',67-247 <ROS>
A; Residues: 1-65, M',67-247 <ROS>
A; Residues: 1-80, M',67-247 <ROS>
A; Residues: 1-80, M',67-247 <ROS>
A; Title: Characterization of the 5'-flanking region of the A; Reference number: I38072; MUID:92118032; PMID:1339267
A; Accession: I38072

A; Accession: I38072

A; Accession: I38072

A; Accession: I38072

A; Molecule type: mRNA
A; Residues: 1-247 <SHI>
A; Cross-references: EMBL:X60201; NID:g3928269; PIDN:CAA4276
A; Cross-references: EMBL:X60201; NID:g3928269; PIDN:CAA4276
A; Note: the authors do not discuss this mRNA sequence in th C; Genetics:
A; Gene: GDB:BDNF
A; Cross-references: GDB:125916; OMIM:113505
A; Map position: 11p13-11p13
C; Superfamily: nerve growth factor beta chain
C; Keywords: dimer; glycoprotein
F;1-16/Domain: signal sequence #status predicted <SIG>
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A; Molecule type: DNA
A; Residues: 1-65, 'M', 67-247 <YANN>
R; Maisonpierre, P.C.; Le Beau, M.M.; Espinosa III, R.; Ip, N.Y.; Belluscio, R; Maisonpierre, P.C.; Le Beau, M.M.; Espinosa III, R.; Ip, N.Y.; Belluscio, R; Maisonpierre, P.C.; Le Beau, M.M.; Espinosa III, R.; Ip, N.Y.; Belluscio, R; Title: Human and rat brain-derived neurotrophic factor and neurotrophin-3: A; Reference number: A40304; MUID:91365361; PMID:1889806
A; Accession: A40304
A; Molecule type: mRNA
A; Residues: 1-247 <MAID
A; Residues: 1-247 <MAID
A; Cross-references: GB:M61176; NID:9179404; PIDN:AAA69805.1; PID:9896463
A; Vamamoto, H.; Gurney, M.E.
J. Neurosci. 10, 3469-3478, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross references: GB.M37762; NID:g179402; PIDN:AAA51820.1; R;Yancopoulos, G.D.; Maisonpierre, P.C.; Ip, N.Y.; Aldrich, T. Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990 A;Title: Neurotrophic factors, their receptors, and the signa A; Reference number: A60536; MUID:92111157; PMID:1966766 A;Accession: A60536
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Human platclets contain brain-derived neurotrophic A;Reference number: A37218; MUID:91038253; PMID:2230938 A;Accession: A37218
A;Status: not compared with conceptual translation A;Status: not compared with conceptual translation A;Status: not compared with conceptual translation A;Molecule type: mRNA A;Molecule type: mRNA A;Molecule type: mRNA A;Residues: 138-236 <YAM>
R;Rosenthal, A; Goeddel, D.V.; Nguyen, T.; Martin, E.; Burt R;Rosenthal, A; Goeddel, D.V.; Nguyen, T.;
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A; Residues: 1-247 <JON>
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T.H.; Belluscio,
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               brain-derived neurotrophic factor precursor C;Species: Rattus norvegicus (Norway rat) C;Date: 03-Apr-1992 #sequence_revision 30-Sep.
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A, Title: Regional distribution of brain-derived A; Reference number: S12555; MUID: 90316101; PMID A; Accession: S12555
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C;Species: Mus musculus (house mouse)
C;Date: 31-Dec-1993 #sequence_revision
C;Accession: $21.55; $51180; $51181
R;Hofer, M.; Pagliusi, S.R.; Hohn, A.;
EMBO J. 9, 2459-2464, 1990
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                                                                                                                                                                                                                              A; Molecule type: protein
A; Residues: 112-121 <KO2>
C; Superfamily: nerve grow
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A; Molecule type: protein
A; Residues: 131-135 < KOL>
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                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:x55573; NID:g287898; PIDN:CAA39159.1; PID:g287899 R;Kolbeck, R.; Jungbluth, S.; Barde, Y.A. Eur. J. Biochem. 225, 995-1003, 1994
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A; Residues: 1-249 <HOF>
A; Cross-references: GB:
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                                                                            ARRGELSVCDSISEWVTAADKKTAVDMSGGTVTVLEKVPVSKGQ-LKQYFYETKCNP---
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----MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRPIRIDTSCVCTLTIK
                                                                                              EEGGPGAGGGCCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACVCTLLSR 126
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Pred. No. 3.4e-26;
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No. 3.
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A;Cross-references: E
C;Genetics:
A;Gene: BDNF
C;Superfamily: nerve
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Gene 121, 383-386, 1992
A;Title: A rat brain-derived neurotrophic i
A;Reference number: I60275; MUID:93077058;
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R:Yancopoulos, G.D.; Maisonpierre, P.C.; Ip, N.Y.; Aldrich, T.H.; Belluscio, L.; Boulton Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990
A;Title: Neurotrophic factors, their receptors, and the signal transduction pathways the A;Reference number: A60536; MUID:92111157; PMID:1966766
A;Accession: B60536
                                                                                                         RESULT 11
A30361
brain-derived neurotrophic factor precursor - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 18-Oct-1989 #sequence_revision 18-Oct-1989
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A; Residues: 1-249 < YAN>
  R:Leibrock, J.; Lottspeich, F.; Hohn, A.; Hofer, M.; Henger Nature 341, 149-152, 1989
A;Title: Molecular cloning and expression of brain-derived A;Reference number: A30361; MUID:89384868; PMID:2779653
                                                                                         C; Accession:
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A; Residues: 8-249 <RE2>
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A; Residues: 1-249 < RES>
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A;Accession: I60275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:X67108; NID:g55820; PIDN:CAA47481.1; R;Ohara, O.; Gahara, Y.; Teraoka, H.; Kitamura, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 8-249 <MET>
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A; Residues: 1-249 <MAI>
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                                                                                         A30361
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; PMID:1446835
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                                                                                                         #text_change 16-Jul-1999
                                                              Hengerer,
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                                                                   Masiakowski,
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                                                                   Thoe
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Accession: A30361
A;Molecule type: mRNA
A;Rosidues: 1-252 <LEI>
A;Cross-references: GB:X16713; NID:g1903; PIDN:CAA34685.1; PID:g190
C;Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein; growth factor
F;126/Binding site: carbohydrate (Asn) (covalent) #status predicted
brain-derived neurotrophic factor precursor - souther C;Specles: Xiphophorus maculatus (southern platyfish) C;Date: 13-Sep-1996 *sequence_revision 13-Sep-1996 *t C;Accession: I51708; S26673 R;Gotz, R.; Raulf, F.; Schartl, M.
J. Neurochem. 59, 432-442, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Comment: This factor plays the essential roles in dopaminergic, glutamatergic, and cholinergic neurons C;Superfamily: nerve growth factor beta chain C;Keywords: neurotrophic factor F;1-16/Domain: signal sequence #status predicted <SI F;17-248/Product: brain-derived neurotrophic factor F;198-211/Region: nerve growth factor signature
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A; Residues: 1-248 < ARA>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 345; DB 2;
Pred. No. 3.4e-26;
2; Mismatches 25
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                                                                                                         southern platyfish
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                                                                 #text_change 16-Jul-1999
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survival

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A;Gene: BDNF
C;Superfamily: nerve growth factor beta chain
C;Superfamily: nerve growth factor beta chain
C;Keywords: glycoprotein
F;1-18/Domain: signal sequence #status predicted <SIG>
F;19-150/Domain: propeptide #status predicted <PRO>
F;151-269/Product: brain-derived neurotrophic factor #status
F;143/Binding site: carbohydrate (Asn) (covalent) #status pre
F;163-230,208-259,218-261/Disulfide bonds: #status predicted
                                                                                                                         RESULT 15
150606
brain-derived neurotrophic factor - chicken (fragment)
C;Specles: Gallus gallus (chicken)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
C;Accession: I50606
R;ISackson, P.J.; Towner, M.D.; Huntsman, M.M.
FEBS Lett. 285, 260-264, 1991
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FEBS Lett. 285, 260-264, 1991
A;Title: Comparison of mammalian, chicken and Xenopus brain-derived neurotrophic factor A;Reference number: I50606; MUID:91309745; PMID:1906813
A;Accession: 184765
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A;Accession: I51708
A;Status: translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  brain-derived neurotrophic factor - rhesus macaque (fragment)
C;Species: Macaca mulatta (rhesus macaque)
C;Date: 04-Sep-1997 #sequence_revision 13-Mar-1998 #text_change 16-Jul-1999
C;Accession: I84765
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A; Residues: 1-269 <GOT>
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A; Residues: 1-114 <ISA>
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Matches 64
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                                                                                                                                                                                                        ----MGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFIRIDTSCVCTL 114
                                                                                                                                                                                                                                EEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACVCTL 123
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; Pred. No. 1.2e-25;
21; Mismatches 22;
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A;Title: Comparison of mammalian, chicken and xenopus brain-derived neurotrophic A;Reference number: I50606; MUID:91309745; PMID:1906813
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                                                                                      ----KGYTKEGCRGIDKRHWNSQCRTTQSYVRALIMDNKKRVGWRFIRIDTSCVCTL
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                                                                      ARRGELSVCDSTSEWVTAAEKKTAVDMSGATVTVLEKVPVPKGQ-LKQYFYETKCNP--- 61
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X-RAY CRYSTALLOGRAPHY (2.75 ANGSTROMS). MEDLINE=20095835, PubMed=10631974; Robinson R.C., Radziejewski C., Spragge Kostura M.R., Burtnick L.D., Stuart D. J "The structures of the neurotrophin 4 by neurotrophic factor/neurotrophin 4 bete binding site."; PROTEIN SCI. 8:2589-2597(1999)! FUNCTION: TARGET-DERIVED SURVIVAL E SYMPATHETIC NEURONS! TISSUE SPECIFICITY: HIGHEST LEVELS IN THYMUS, PLACENTA, AND SKELETAL b AND ADULT TISSUES!- SIMILARITY: BELONGS TO THE NGF-BETP This SWISS-PROT entry is copyright. It between the Swiss Institute of Bioinfo the European Bioinformatics Institute use by non-profit institutions as 1c modified and this statement is not reme entitles requires a license agreement or send an email to license@isb-sib.ch)	EQUENCE FROM N.A. ISSUE-Prostate; EDLINE-92212967; PubMe p N.Y., Ibanez C.F., N elluscio L., le Beau M ancopoulos G.D.; Mammalian neurotrophin issue distribution, an roc. Natl. Acad. Sci. 2] EQUENCE FROM N.A. EQUENCE FROM N.A. EDLINE-92075279; PubMe erkemeier L.R., Winslo osenthal A.; Neurotrophin-5: a nove rkB.";	STANDA  (Rel. 28, )4 (Rel. 28, )4 (Rel. 28, )1 (Rel. 40, )1 recur  nin-5 precur  nutrophic fa  F4.  Sins (Human).  Metazoa; C  Metazoa; C  Eutheria; P	42.4 42.3 41.5 37.5 37.5 36.1 36.1 34.6 33.7 32.7
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01-FEB-1994 (Rel. 28, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Neurotrophin-5 precursor (NT-5) (Neutrophic factor 4).
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Mammalia; Eutheria; Rodentia;
 Neuron 7:857-866(1991).
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                                                                                                                                                       Berkemeier L.R., Oezcellk T., Francke U., Rosenthal A.; "Human chromosome 19 contains the neurotrophin-5 gene locus related genes that may encode novel acidic neurotrophins."; Somat. Cell Mol. Genet. 18:233-245(1992).
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-!- SUBUNIT: HOMODIMER, ASSOCIATED BY NONCOVALENT FORCES (B
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                              TISSUE-Fetal;

MEDLINE-92358359; PubMed-1496419;

MEDLINE-1496419;

Berkemeter L.R., Oezcelik T., Francke U., Rosenthal A.;

"Human chromosome 19 contains the neurotrophin-5 gene loc

related genes that may encode novel acidic neurotrophins.

Somat. Cell Mol. Genet. 18:233-245(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-FEB-1994
01-FEB-1994
15-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; (
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ol-FEB-1994 (Rel. 28, Created)
Ol-FEB-1994 (Rel. 28, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Neurotrophin-6 beta (NT-6 beta) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NT6B_HUMAN P34133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
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ProDom; PD002052; NGF; 1.
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                                                                                                               SIMILARITY).
SIMILARITY: BELONGS
                                                                                                                                                           SUBUNIT:
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186
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Primates;
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                                                                                                               THE NGF-BETA FAMILY
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74AE6C038D78A3BB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /FTId=VAR_004627
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                                                                                                                                                           FORCES
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(See http://www.isb-sib.ch/announce/

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Best Local S
Matches 96
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CARBOHYD
SEQUENCE
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                                                                                                                                                MEDLINE-91222573; PubMed-2025430;
Hallbocock F., Ibanez C.F., Persson H.;
Hallbocock F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family reveal a
"Evolutionary studies of the nerve growth factor family reveal a
novel member abundantly expressed in Xenopus ovary.";
Neuron 6:845-858(1991).
-1- FUNCTION: NT-4 COULD PLAY A ROLE IN OOGENESIS AND/OR EARLY
EMBRYOGENESIS. NT-4 INTERACTS WITH THE LOW AFFINITY NGF RECEP-
AND ELICITS NEURITE OUTGROWTH FROM EXPLANTED DORSAL ROOT GANGLIA,
WITH NO AND LOWER ACTIVITY IN SYMPATHETIC AND NODOSE GANGLIA,
                                                                                                                                                                                                                                                                                                                                                                                                                                         NT4_XENLA
P24727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-1992 (Rel. 21, Created)
01-MAR-1992 (Rel. 21, Last sequence up
30-MAY-2000 (Rel. 39, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00243; NGF; 1.
ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removentities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Anura; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; S41540; AAB22780.1; -. HSSP; P34130; 1B98.
                                                                                                                                                                                                                                                                                                                                                                        Neurotrophin-4 precursor (NT-4)
Xenopus laevis (African clawed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Growth factor.
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                                                                                                         TISSUE SPECIFICITY:
SIMILARITY: BELONGS
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PS50270;
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143
122
257 /
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27419 N
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NGF_2; 1.
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73.3%;
                                                                                                          TO THE NGF-BETA FAMILY.
                                                                                                                          OVARY.
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                                                                                                                                                                                                                                                                                                                                              a; Craniata; Vertebrata; Euteleostomi;
Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
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pred. No. 1.8e
9; Mismatches
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N-LINKED (GLCNAC. . .) (P
2EA9320918AE505B CRC64;
                                                                                                                                                                                                                                                                                                                                                                         trog)
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              (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                    update)
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                                                                                                                                                                NGF RECEPTOR
ROOT GANGLIA
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                                                                     collaboration -
L outstation -
                            in no way commercial
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RESULT 7
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Best Local S
Matches 80
                             MEDLINE-9122573; PubMed-2025430;
Hallboeoek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth
novel member abundantly expressed in Xeno;
Neuron 6.845-888(1991).
-i- FUNCTION: SEEMS TO PROMOTES THE SURVI-
PROPRIOCEPTIVE SENSORY NEURONS.
-i- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                           01-MAY-1992 (Rel. 22, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic (Nerve growth factor 2) (NGF-2).
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DISULFID
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SEQUENCE
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PROPEP
                                                                                                                      DNA
[2]
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PIR; JH0400; JH0400.
HSSP; P34130; 1B98.
  This
                                                                                                                                        Maisonpierre P., Belluscio
"Gene sequences of chicken
                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                               NT3_CHICK
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                                                                                                                                                            MEDLINE-93091238;
                                                                                                                                                                                                              Archosauria;
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                                                                                                            SEQUENCE OF 194-236 FROM N.A.
                                                                                                                                                                                         NCBI_TaxID=9031;
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                   SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                           LLSRTGR
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  SWISS-PROT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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PS50270; NGF_2;
                                                                                                                                3:49-54(1992).
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236
                                                                                                                                                                                                                       Metazoa;
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                                                                                                                                                                                                                                                                                                               STANDARD;
 entry
                                                                                                                                   PubMed=1457809;
~~11uscio L., Conover J.C.,
~~1ac and NT-3.";
                                                                                                                                                                                                               Neognathae;
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5; Mismatches
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Pred. No. 2.
                                                                                                                                                                                                               Craniata; Vertebrata; ; Galliformes; Phasian
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                                                                    e growth factor
in Xenopus ovar
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                                                 SURVIVAL
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  produced
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                                                                     ovary.
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Matches
SEQUENCE FROM N.A.
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MEDILINE-91045937; PubMed-,
Jones K.R., Reichardt L.F
"Molecular cloning of a h
growth factor family.";
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DISULFID
DISULFID
DISULFID
CARBOHYD
SEQUENCE
                                                                                                                                                                                          01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic (Nerve growth factor 2) (NGF-2).
                                                                                                                                                                                                                                                  NT3_HUMAN
P20783;
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the Eurc
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PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
                                                            MEDIINE-90262727; PubMed-2344409;
Rosenthal A., Goeddel D.V., Nguyen T., Lewi
Laramee G.R., Nikolics K., Winslow J.W.;
"Primary structure and biological activity
neurotrophic factor.";
Neuron 4:767-773(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growen
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Mammalia; E
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InterPro; IPR002072; NGF.
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                                                                                                               SEQUENCE FROM N.A. MEDLINE-90262727;
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P20783; 1B8K.
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67; Conser
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                                PubMed=2236018;
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138
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Primates;
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N-LINKED (GLCNA
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           gene
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EE043BA2A005C1E7
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No. 8.
            that
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PIR; PIR; PIR; PDB; PDB;

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EMBL;
PIR;
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                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=91365361; PubMed=1889806; MEDLINE=91365361; PubMed=1889806; Maisonpierre P.C., le Beau M.M., Espinosa R. Belluscio L., de la Monte S.M., Squinto S.,
                                                                                                                                                                                                                                                                                                                                                                              Arinami T., Takekoshi K., Itokawa M., Hamaguchi H., "Failure to find associations of the CA repeat polynfirst intron and the Gly-63/Glu-63 polymorphism of 1
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                                                                                                                                                                                                                                                                                     <del>-</del> - <del>-</del> -
                                                                                                                                                                                                                                                                                                                                                      gene with schizophrenia.";
Psychiatr. Genet. 6:13-15(1996).
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MEDLINE-96253892; PubMed-8925252;
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gene structures, distributions,
Genomics 10:558-568(1991).
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                                                                                                                                                entities requires a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             schizophrenia."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VARIANT GLU-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochemistry 34:4139-4146(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           heterodimer."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS).
MEDLINE=95217877; PubMed=7703225;
RODINSon R.C., Radziejewski C., Stuart
"Structure of the brain-derived neurot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hallboeoek F., Ibanez C.F., Persson H.; 
"Evolutionary studies of the nerve grow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=91222573; PubMed=2025430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Leukocyte;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM
                                                                                                                                                                                                                                       FUNCTION: SEEMS TO PROMOTES THE SURVIVAL OF VISCERAL AND PROPRIOCEPTIVE SENSORY NEURONS.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: BRAIN AND PERIPHERAL TISSUES.
POLYMORPHISM: Variant Glu-76 (frequently reported as Glu-63) thought to be associated with severe forms of schizophrenia. does not seem to be the case.
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                     L; X53655; CAA37703.1;
L; M37763; AAA59933.1;
L; M61180; AAA63231.1;
; JH0141; JH0141;
J A36208; A36208
; S10719; S10719;
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ura K., Nakahama
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ns, and chromosomal localizations.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic (Nerve growth factor 2) (NGF-2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
Growth factor; Signal; Poly
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MIM; 162660;
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                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; Rocel_TaxID=10090;
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                      This SWISS-PROT entry is copyright. It is produced through a cetter the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and to modified and this statement is not removed. Usage by and to
                                                                                                                                                                                                                                         SEQUENCE FROM N.A.

MEDLINE-90190865; PubMed-2314473;

Hohn A., Leibrock J., Bailey K., Barde Y.-A.;

"Identification and characterization of a novel
growth factor/brain-derived neurotrophic factor
Nature 344.39-341(1990).

-1- FUNCTION: SEEMS TO PROMOTES THE SURVIVAL OF
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                                                                                                                                                       PROPRIOCEPTIVE SENSORY NEURONS.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: BAZIN AND PERIPHERAL TI
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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tatement is not removed. Usage by and for license agreement (See http://www.isb-sib.
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Pred. No. 8.6e
L8; Mismatches
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                                                                                                                                            SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=90319130; PubMed=2164684;
Ernfors P., Ibanez C.F., Ebendal T., Olson L., Pers
"Molecular cloning and neurotrophic activities of structural similarities to nerve growth factor: de topographical expression in the brain.";
natl. Acad. Sci. U.S.A. 87:5454-5458(1990).
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                                MEDLINE-90208301; PubMed-2321006; Maisonpierre P.C., Belluscio L., Lindsay R.M., Yancopoulos G.D.; "Neurotrophin-3: a neurotrophic f. Science 247:1446-1451(1990).
                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
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01-NOV-1990 (Rel. 16, Last sequence up
30-MAY-2000 (Rel. 39, Last annotation
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Pred. No. 8.6e-28;
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RESULT 11
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EMBL; M33968; AAA41727.1; -.
EMBL; M61179; AAA63497.1; -.
PIR; A35781; A35781.
PIR; A40094; A40094.
HSSP; P20783; 1B8K.
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SEQUENCE
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InterPro; IPRO02072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00438; GFCYSKNOT.
PRINTS; PR00268; NGF.
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"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
Neuron 6.845-858(1991).
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SMART; SM00140; NGF; 1.
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SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: BRAIN AND PERIPHERAL TISSUES
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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Squinto S., Furth
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P25435;
01-MAY-1992 (Rel. 22, Created)
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30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic (Nerve growth factor 2) (NGF-2).
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Felis silvestris catus (Cat).
Felis silvestris catus (Cat).
Fissipedia; Felidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lein E.S., Hohn A., Shatz "Dynamic regulation of BDN development.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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30-MAY-2000 (Rel. 39, Last annotation update)
Neurotrophin-3 precursor (NT-3) (Neurotrophic
growth factor 2) (NGF-2).
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Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
Xenopodinae; Xenopus.
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InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
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"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
Neuron 6:845-858(1991).
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SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1;
PROSITE; PS50270; NGF_2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=91222573; PubMed=2025430;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 197-217 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-97252639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - ! - SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                          PROPEP
  203
                                                                                              149
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                                                                                           PGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACVCTLLSRTGRA 130
  PVK--NGCRGIDDKHWNSQCKTSQTYVRALTSENNKMVGWRWIRIDTSCVCALSRKIGRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          factor;
                                                                                                                                                                                                  66;
                                                                                                                                                                                                                         Similarity
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Pred. No. 1.7e
L8; Mismatches
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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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FFB8507A5EA93CC5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
                                                                                                                                                                                                                      355;
No. 1
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.7e-27;
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                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
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RESULT

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BDNF\_HUMAN STANDARD P23560; Q9UC24; Q9BYY7; 01-NOV-1991 (Rel. 20, C

STANDARD;

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BDNE_HUMAN
ID BDNE_HI
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Best Local
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BDNF_CAVPO
070183;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
PROPEP
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00268; NGF. ProDom; PD002052; NGF; SMART; SM00140; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AB012097; BAA25176.1; HSSP; P23560; 188M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-Hartley white;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10141;
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brain-derived
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mitted (MAR-1998) to the EMBLYGEOBANK/DDBJ databases.
mitted (MAR-1998) to the EMBLYGEOF NEURONAL POPULATIONS THAT
FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL POPULATIONS THAT
ALL LOCATED EITHER IN THE CENTRAL NERVOUS SYSTEM OR DIRECTLY
CONNECTED TO IT (BY SIMILARITY).
SUBCELLULAR LOCATION: SECTETED
SUBCELLULAR LOCATION: SECTETED
SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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                                                                                                                                                        RGR
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                                                                                                                                                                                                                                                                                                                                                                                                                     21;
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BY SIMILARITY.

BRAIN-DERIVED NEUROTROPHIC FACTOR.

BRAIN-DERIVED NEUROTROPHIC FACTOR.

CLEAVAGE (BY SIP) (BY SIMILARITY).

BY SIMILARITY.

                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
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Hystricognathi; Caviidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                         346;
No. 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
.2e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 255;
                                                                                                                                                                                                                                                                                                                                    -LKOYFYETKCNP---
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                                                                                                                                                                                                                                                                                                                                       196
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SEQUENCE FROM NO. PubMed=1339267;
MEDLINE=92118032; PubMed=1339267;
Shintani A., Ono Y., Kalsho Y., Igarashi K.;
"Characterization of the 5'-flanking region of the "Characterization of the 5'-flanking region of the brain-derived neurotrophic factor gene.";
sicchem. Biophys. Res. Commun. 182:325-332(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jones K.R., Reichardt L.F.;
Jones K.R., Reichardt L.F.;
"Molecular cloning of a human gene that is growth factor family.";
a7.8060-8064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-91222573; PubMed-2025430;
Hallboeoek F., Ibanez C.F., Persson H.;
"Evolutionary studies of the nerve growth factor family reveal novel member abundantly expressed in Xenopus ovary.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
NCBI_TaxID=9606;
 CHARACTERIZATION, MEDLINE-21201090;
                                                                     Robinson R.C., Rau "Structure of the heterodimer.";
                                                                                                     X-RAY CRYSTALLOWNERS: ... .- 7703225;
MEDLINE=95217877; PubMed=7703225;
Padzielewski C., Stuart
                                                                                                                                                                                                                                                     SEQUENCE OF 12-197 FROM N.A. MEDLINE=21082082; PubMed=11214319;
                                                                                                                                                                                                                                                                                                                          Rosenfeld R.D., Zeni L., Haniu M., Talvenheimo J., Bennett L., Miller J.A., Welcher A.A.; "Purification and identification of brain-derived from human serum.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ξ
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Malsonplerre P.C., le Beau M.M., Espinos
Belluscio L., de la Monte S.M., Squinto
Yancopoulos G.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brain-derived
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15-JUN-2002
                                                      Biochemistry
                                                                                                                                                                                 "Molecular phylogenetics Nature 409:614-618(2001).
                                                                                                                                                                                                                 O'Brien S
                                                                                                                                                                                                                                    MEDLINE=21082082; PubMed.
Murphy W.J., Eizirik E.,
                                                                                                                                                                                                                                                                                                             Protein
                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-96136633; PubMed-8527932;
                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Serum;
                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 129-144.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Leukocyte;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
Wu J., Zhang B., 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Human and rat brain-derived neurotrophic factor and neurotrophin-3: gene structures, distributions, and chromosomal localizations.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE-91045937;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6:845-858(1991).
                                                                                                                                                                                                                                                                                                             Expr. Purif.
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1 (JUL-2001)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MAY-1995)
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2 (Rel. 41, Last :
ved neurotrophic
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                                                      34:4139-4146(1995).
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                                                                                      Radziejewski C.,
he brain-derived
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AND MUTAGENESIS PubMed=11152678;
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                                                                                                                                                                                                                                                                                                           6:465-471(1995).
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                                                                                                                                                                                                  and the
                                                                                                                                                                                                                                    Johnson
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ne EMBL/GenBank/DDBJ
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PROSITE; PS50270; NGF_2; 1.
Growth factor: Signal: Glyc
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                                   EEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACVCTLLSR
                                                               ARRGELSVCDSISEWYTAADKKTAVDMSGGTVTVLEKVPVSKGQ-LKQYFYETKCNP---
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-!- FUNCTION: PROMOTES THE SURVIVAL OF NEURONAL POPULATIONS THAT ALL LOCATED EITHER IN THE CENTRAL NERVOUS SYSTEM OR DIRECTLY CONNECTED TO IT (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE NGF-BETA FAMILY.
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Mammalia; Eutheria; Carnivora; Fissipedia; Procyonidae; Procyon.
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PROSITE; PS00248; NGF_1; 1.

PROSITE; PS50270; NGF_2; 1.
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O8Whh4 mus musculu
O9i812 poephila gu
O8q974 cyclophiops
O8q975 phrynocepha
O8q975 japalura sp
O9yh42 brachydanio
O9xy95 lampetra fl
O9n182 macaca fusc
O8q977 tylototrito
O9p2q8 homo sapien
O9ukl8 homo sapien
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EMBL; AK017559; BAB30805.1; HSSP; P23560; 1B8M.		"Functional annotation of a full-length mouse cDNA collection.";	Hayashizaki Y.;	Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,	Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,	Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch KF.,	Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,	Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,	Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,	Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,	Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,	Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,	Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,	Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,	Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,	Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,	Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,	Kiyosawa H.,		K., Yoshino M., Itoh M., Ishii		STRAIN=C57BL/6J; TISSUE=EMBRYO;	SEQUENCE FROM N.A.	[1]	NCBI_TaxID=10090;	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Mus musculus (Mouse).	BDNF.	Brain derived neurotrophic factor.	01-DEC-2001 (TrEMBLrel. 19, Last annotation update)	01-JUN-2001 (TrEMBLrel. 17, Last sequence update)	01-JUN-2001 (TrEMBLrel. 17, Created)	Q9CYL3;	Q9CYL3 PRELIMINARY; PRT; 153 AA.	ILT 1

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PRODOM; PD002052; NGF: 1.
SMART; SM00140; NGF: 1.
PROSITE; PS00248; NGE 1: 1.
PROSITE; PS50270; NGF 2: 1.
SEQUENCE 153 AA; 17519 MW;
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InterPro; IPR002072; NGF
Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             deduced amino acid sequences. Submitted (APR-1996) to the EEMBL: U56639; AAD10843.1;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Procyonidae; Ailurus.
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PROSITE; PS00248; NGF_2; 1.
PROSITE; PS50270; NGF_2; 1.
SEQUENCE 247 AA; 27870 MW;
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Submitted (DEC-2001) to the EMBL/GenB
EMBL; AF459642; AAL58475.1; -.
InterPro; IPR002072; NGF.
pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF; 1.
PRINTS; PR002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS00248; NGF_1; UNKNOWN_1.
PROSITE; PS00248; NGF_2; 1.
SEQUENCE 249 AA; 28109 MW; 21CEAE
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Q8VHH4;
01-MAR-2002
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BONF (Fragment).

Poephila guttata (Zebra finch) (Taeniopygia guttata).

Poephila guttata (Zebra finch) (Taeniopygia guttata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Neognathae; Passeriformes; Estrildidae;
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                          Johnson F., Norstrom E., Soderstrom K.;
"Increased expression of endogenous biotin, but not telencephalic song regions during zebra finch vocal Brain Res. Dev. Brain Res. 120:113-123(2000).
EMBL, AF255389; AAF78050.2; -
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01-OCT-2000 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
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Kim S.J., Kim C.S., Cha Y.J.,
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                            InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00268; NGF.
ProDom; PD002052; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Archosauria; Aves; Neognathae; Estrildinae; Taeniopygia. NCBI_TaxID-59729;
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HSSP; P23560; 1B8M.
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SEQUENCE
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"Molecular cloning of brain derived neurotrophic fa
amphibians and reptiles and its application in the
phylogeny and taxonomy.";
Submitted (APR-2002) to the EMBL/GenBank/DDBJ datab
EMBL; AF497715; AAM18716.1; -.
CHAIN 128 246 BRAIN DERIVED NEUROTRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Lepidosauria; Squamata; Scleroglosa; Sc Colubridae; Colubridae
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Cao M., Yang Y.H., Zhang Y.Z.;

Cao M., Yang Y.H., Zhang Y.Z.;

"Molecular cloning of brain derived neurotrophic factor amphibtans and reptiles and its application in the rese phylogeny and taxonomy.";

Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases EMBL; AF49713; AAM18714.1;

CHAIN 128 246

BRAIN DERIVED NEUROTROPHIC
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Japalura splendida.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eu
Lenidosauria; Squamata; Iguania; Acrodonta; Agamidae;
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Cao M., Yang Y.H., Zhang Y.Z.;

"Molecular cloning of brain derived neurotrophic amphibians and reptiles and its application in the phylogeny and taxonomy.";

Submitted (APR-2002) to the EMBL/GenBank/DDBJ dat EMBL; AF497714; AAM18715.1; -...
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Lepidosauria; Squamata; Iguania; Acrodonta; Agamidae; Agaminae;
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                                                                                                                                                                                                                                                               SEQUENCE
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ARRGEFSVCDSTSEWVTAAEKKTAVDMSGATVTVLEKVPVPKGQ-LKQYFYETKCNS---
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Pred. No. 1.1e-24;
""smatches 28;
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Matches 62
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PRODOM; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS00248; NGF; 1; 1.
PROSITE; PS50270; NGF; 2; 1.
SEQUENCE 270 AA; 29482 MW;
                                                                                                                                                                                                                                                                                                                 01-NOV-1999
01-NOV-1999
01-DEC-2001
              MEDITINE-99003404; PubMed-9786977;
Hallbook F., Lundin L.G., Kullander K.;
"Lampetra fluviatilis neurotrophin homolog,
neurotrophin ancestor, discloses the early n
                                                                                                                                                                                                                                                                                                                                                                                     Q9XY95;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformu
Cyprinidae; Danio.
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Submitted (DEC-1995) to th
EMBL; U42489; AAD00016.1;
HSSP; P23560; 1BBM.
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01-MAY-1999 (TrEMBLrel.
01-MAY-1999 (TrEMBLrel.
                                                                                                                                                                                                     Lampetra fluviatilis
Eukaryota; Metazoa; C
Petromyzontiformes; F
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  neurotrophin ancestor, neurotrophins in the v
                                                                                                                TISSUE-LIVER;
                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                            Neurotrophin.
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(TrEMBLrel. 12,
(TrEMBLrel. 19,
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llarity 50.4%;
Conservative 25
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                                                                                                                                                                                                     s (River lamprey).
Chordata; Craniata; Vertebrata;
Petromyzontidae; Lampetra.
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Pred. No. 1.5e
25; Mismatches
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SEQUENCE
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01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence
01-DEC-2001 (TrEMBLrel. 19, Last annotation
Neurotrophin-3 (Fragment).
Macaca fuscata (Japanese macaque).
Eukaryota; Metazoa; Chordata; Craniata; Ve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
PROSITE; PS50270; NGE_2; 1.
CHAIN 141 324
SEQUENCE 324 AA; 35267 MW;
                                                                                                                                                                 PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                  Hashimoto T., Okuno H., Tokuyama W., Li Y.X., Miyashita Y.; "Expression of brain-derived neurotrophic factor, neurotrophin-3 their receptor messenger RNAs in monkey rhinal cortex.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99270338; PubMed-10340513;
Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Miyashita Y.;
Okuno H., Tokuyama W., Li Y.X., Hashimoto T., Miyashita Y.;
"Quantitative evaluation of neurotrophin and trk mRNA expression
"Quantitative evaluation of neurotrophin and trk mRNA expression
visual and limbic areas along the occipito-temporo-hippocampal pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9N182
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Pfam; PF00243; NGF;
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EMBL; AF071432; AAI
HSSP; P20783; 188K.
                                                                                                                                                                                                                                                                                                                                EMBL; AF222683; AAF33791.1; HSSP; P20783; 188K.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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                                                                                                                                                                                                               SMART; SM00140; NGF;
                                                                                                                                                                                                                                     Pfam; PF00243; NGF; 1. PRINTS; PR00268; NGF. ProDom; PD002052; NGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-BLOOD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9542;
                                                                                                                                                                                                                                                                                 InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
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                             Similarity
                                                                                                                                                                 PS50248; NGF_1; PS50270; NGF_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             macaque monkeys.";
Neurol. 408:378-398(1999).
                                                                                            241
241 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
    Conservative
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                                                                                               241
27803 MW;
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Last annotation update)
                        Score 322;
Pred. No. 4
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; 9D6B56C1978F8485 CRC64;
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Kilar Project.";

Submitted (JAN-2000) to the El
EMBL; AB037517; BAA90437.1; -
HSSP; PD1139; IBET.

InterPro; IPR002072; NGF.
Pfan; PF00263; NGF; 1.
PRINTS; PR00268; NGF;
PRODOm; PD002052; NGF; 1.
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Q8QG77;
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Homo sapiens (Human).
Homo sapiens (Human).
Homo sapiens (Human).
Homo sapiens (Human).
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Cao M., Yang Y.H., Zhang Y.Z.;

Cao M., Yang Y.H., Zhang Y.Z.;

"Cloning and sequence analysis of brain derived neurotrophic (BDNF) gene from Sichuan Newt (Tylototriton taliangensis).";

Ying Yun Yu Huan Ching Shang Wu Hsueh Pao 8:0-0(2002).

EMBL; AF497712; AAM18078.1; -.

EMBL; AF497712; AAM18078.1; -.

SEQUENCE 247 AA; 27841 MW; FFCB5F28A7620DE0 CRC64;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Caudata; Salamandroidea; Salamandridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation updat
Brain derived neurotrophic factor.
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22; Mismatches
                                                                                                                                                     EMBL/GenBank/DDBJ
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O1-MAY-2000 (TrEMBLrel. 1
O1-MAY-2000 (TrEMBLrel. 1
O1-MAR-2002 (TrEMBLrel. 2
Nerve growth factor B.
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Matches 59
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Submitted (AUG-2001) to the EMBL/GenBL
EMBL; AF411526; AALO5874.1; -.
InterPro, IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PrODOM; PD002052; NGF; 1.
PROSITE; PS00248; NGF=1; UNKNOWN_1.
PROSITE; PS00248; NGF=2; 1.
SEQUENCE 241 AA; 26964 MM; 745216.
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PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
SEQUENCE 241 AA; 26998 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q96P60;
01-DEC-2001
01-DEC-2001
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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Pred. No. 1.1e-21;
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Last sequence update)
Last annotation updat
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Pred. No. 1.1e-21;
0; Mismatches 39;
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AC Q9N2F
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DT 01-DE
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CS Pan t
CS Pan (1)
CC Mamma
OC Eukar
OC Mamma
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RN (1)
RP SEQUE
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DR HSSP;
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Submitted (MAY-1999) to the Exempt; Ar150960; AAD55975.1; -
HSSP; P01139; 1BET.
InterPro; IPR002072; NGF.
Pfam; PF00243; NGF; 1.
PRINTS; PR00288; NGF:
PRODOM; PD002052; NGF: 1.
SMART; SM00140; NGF: 1.
PROSITE; PS00248; NGF_1; 1.
PROSITE; PS50270; NGF_2; 1.
NON_TER 241 241
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Q9N2F1
Q9N2F1:
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
01-DEC-2001 (TrEMBLrel. (Fragment).
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[2]
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
NCBI_TaxID-9806;
[1]
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ProDom; PD002052; NGF; 1.
SMART; SM00140; NGF; 1.
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MEDLINE=99256269; PubMed=10322959;
Tong Y., Wang H., Chen W.;
"Cloning and sequencing of the gen
                                                                                                                                                                           Submitted (JAN-2000) to the EMBL; AB037518; BAA90438.1; HSSP; P01139; 1BET
                                                                                                                                  Pfam;
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Mammalia; Eutheria;
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Eukaryota; Metazoa; Chordata;
                                                                                                                                InterPro; IPR002072; NGF. Pfam; PF00243; NGF; 1.
                                                                                                                                                                                                                                                                   Kitano T., Kobayakawa H.,
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PS50270; NGF_2; 1.
241 AA; 26959 MW;
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Pred. No. 1.1e-21;
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    length: 0
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1: /cgn2_6/ptodata/1,
2: /ggn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /ggn2_6/ptodata/1,
6: /cgn2_6/ptodata/1,
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
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/cgn2_6/ptodata/1/iaa/B_COMB.pep:*
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US-08-970-865-6
US-08-581-662-1
US-08-33-673-6
US-09-664-295-1
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US-08-441-513A-5
US-08-441-513A-5
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## RESULT 1 US-08-970-865-6 TELEFAX: 650/932. . . . 6: INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS: LENGTH: 130 amino acids TYPE: Amino Acid US-08-970-865-6 Sequence 6, Application Patent No. 6005081 GENERAL INFORMATION: PRIOR APPLICATION DATA: APPLICATION NUMBER: 60/030838 FILING DATE: 11/15/1996 PRIOR APPLICATION DATA: APPLICATION NUMBER: 60/047855 FILING DATE: 5/29/1997 ATTORNEY/AGENT INFORMATION: NAME: TOICHIA, PhD., TIMOTHY E. REGISTRATION NUMBER: 36,700 REGISTRATION NUMBER: 91063R2 COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch, 1.44 mb f COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WinPatin (Genentech) SOFTWARE: WinPatin (Ger CURRENT APPLICATION DATA: TELECOMMUNICATION INFORMATION: APPLICANT: Louis E. Burton, Charles H. Schmelzer, Joanne T. Beck TITLE OF INVENTION: Purification of NGF NUMBER OF SEQUENCES: 6 CORRESPONDENCE ADDRESS: APPLICATION NUMBER: US/08/970,865 FILING DATE: 14-No. 6005081-1997 CLASSIFICATION: 530 STREET: 1 DNA Wa CITY: South San STATE: Californi TELEPHONE: 650/225-8674 TELEFAX: 650/952-9881 COUNTRY: ADDRESSEE: 94080 1 DNA Way San Francisco Application US/08970865 California USA 6. 1.44 Mb floppy disk P1063R2

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Query Match Best Local S Matches 130

y Match 100.0%; Score 698; DB 3; Local Similarity 100.0%; Pred. No. 5.2e-73; hes 130; Conservative 0; Mismatches 0;

Length 130; Indels

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Gaps

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1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60

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CURRENT APPLICATION NUMBER: US/08/581,662
CURRENT FILLING DATE: 1995-12-29
NUMBER OF SEQ ID NOS: 36
SEQ ID NO 1
LENGTH: 130
TYPE: PRT
ORGANISM: Homo saplens
US-08-581-662-1
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US-09-363-573-6
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Patent No. 6121235
PATENT INFORMATION:
APPLICANT: Gao. Wei-Qiang
TITLE OF INVENTION: Treatment of Balance Impairments
FILE REFERENCE: P0981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 6, Application US/09363573 Patent No. 6184360
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                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                             APPLICANT: Louis E. Burton, Charles H. Schmelzer, Joanne T. TITLE OF INVENTION: Purification of NGF NUMBER OF SEQUENCES: 6
                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
             CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
FILING DATE: 14-No.
                                                                                                              CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
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nes 130; Conserv
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CITY: South San
STATE: Californi
                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WinPatin (Genentech)
                                                                               FILING DATE:
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                                                                                                                                                                                                                                                                                                  ADDRESSEE:
 APPLICATION NUMBER:
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                                                                                                                                                                                                                                 USA
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US/08/970,865
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60/030838
                                                                                                  US/09/363,573
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멍
                                                                                                                                                  ; ORGANISM: Homo sapien US-09-675-503-6
                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/030838
PRIOR FILING DATE: 1996-11-15
PRIOR APPLICATION NUMBER: 60/047855
PRIOR FILING DATE: 1997-05-29
PRIOR APPLICATION NUMBER: 08/970865
PRIOR APPLICATION NUMBER: 09/363573
PRIOR APPLICATION NUMBER: 09/363573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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                                                                                                                                                                                                                            SOFTWARE:
SEQ ID NO 6
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APPLICANT:
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APPLICATION NUMBER: 5/29/1997
ATTORNEY/AGENT INFORMATION:
ANAME: TOICHLA, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P1063R2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-8674
TELEPHONE: 650/225-8681
                                                                                           Query Match
Best Local Similarity
                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: ISOLATION OF NEUROTROPHINS FROM A
TITLE OF INVENTION: MIXTURE CONTAINING OTHER PROTEINS AND NEUROTROPHIN VARIANTS
TITLE OF INVENTION: USING HYDROPHOBIC INTERACTION CHROMATOGRAPHY
FILE REFERENCE: GENERY.037C2
CURRENT APPLICATION NUMBER: US/09/675,503
CURRENT FILING DATE: 2000-09-29
CURRENT FILING DATE: 2000-09-29
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                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSEQ for Windows Version
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                                                                                                                                                                                         TYPE: PRT
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LENGTH: 130 amino acids
TYPE: Amino Acid
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1 GYSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
                 1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
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                                                                            Score 698; DB 4;
Pred. No. 5.2e-73;
Nismatches 0;
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US-08-440-049-5
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; LENGTH: 130
; TYPE: PRT
; ORGANISM: Homo saplens
US-09-664-295-1
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Patent No. 5728803
GENERAL INFORMATION:
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TITLE OF INVENTION: Treatment of Balance Impairments
FILE REFERENCE: GENENT OSIC1
CURRENT APPLICATION NUMBER: US/09/664,295
CURRENT FILING DATE: 2000-09-18
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                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: PA
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                    SOFTWARE: WinPatin (Ger
CURRENT APPLICATION DATA:
                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Urfer, Roman
APPLICANT: Presta, Leonard
APPLICANT: Winslow, John W.
                 PRIOR APPLICATION DATA:
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STREET: 460 Point San Bruno
CITY: South San Francisco
STATE: California
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                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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ZIP: 94080
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                                CLASSIFICATION:
                                                     APPLICATION NUMBER: FILING DATE: 12-Ma
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                                                                                                                                                                                                                    USA
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                                              12-May-1995
                                                                                                                                                                                                                                                                                                                                               PANTROPIC NEUROTROPHIC FACTORS
                                                                     US/08/440,049
                                                                                                          (Genentech)
08/253937
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Pred. No. 5.2e-73;
; Mismatches 0;
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Best Local Similarity
Matches 129; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
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APPLICANT: Urfer, Roman
APPLICANT: Presta, Leonard G.
APPLICANT: Winslow, John W.
TITLE OF INVENTION: Pantropic
NUMBER OF SEQUENCES: 20
                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/253937
ETILING DATE: 03-UUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: TOTCHLA, PhD., TIMOTHY E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0905C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                  TELEFAX: 650/952-9881 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb f
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
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                            SEQUENCE CHARACTERISTICS:
                                                                                                      TELECOMMUNICATION INFORMATION:
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                                                                                    TELEPHONE:
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             LENGTH:
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o. 5981480
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Amino Acid
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99.2%;
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                                                                                                                                                            Timothy E.
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Pred. No. 5.7e-72;
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TOPOLOGY: US-08-441-513A-5
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Best Local
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                                                                                                      Query Match
Best Local S
                                                                                            Matches
                                                                                                                                                                       TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acid
                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: Torchia, Timothy E.
REGISTRATION NUMBER: 36,700
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94080
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                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
61
                      61
                                                                                                                                                                  TYPE: amino acid
                                           CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV 120
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CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV 120
                                                                                            al Similarity
129; Conserv
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29; Conservative
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Pred. No. 5.7e-72;
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Pred. No. 5.7e-72;
0; Mismatches 1
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RESULT 9
US-08-451-947-6
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Best Local Similarity
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SEQUENCE CHARACTERISTICS:
LENGTH: 168 amino acids
TYPE: amino acid
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ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
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CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
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APPLICATION NUMBER: 07/587707
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121 CTLLSRTGRA 130
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Generation
 159
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                             121 CTLLSRTGRA 130
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                                                                           61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
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TELEFAX: 415/952-9881
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                                                                                                                       TOPOLOGY:
CTLLSRTGRA 168
                                                           CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV 158
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Pred. No. 7.9e-72;
0; Mismatches 1;
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NUMBER OF SEQUENCES:

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RESULT 11
US-08-928-694-6
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US-08-424-826A-6
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Sequence 6, Application US/08928694
Patent NO. 6037320
GENERAL INFORMATION:
APPLICANT: ROSEWTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
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Patent No. 5830858
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/424,826A
FILING DATE: 19-Apr-1995
CLASSIFICATION: 514
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TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 07/58 FILING DATE: 25-SEP-1990 ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER:
FILING DATE: 31-JAN-
                                                                                                                                                                                       121
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FILING DATE: 10-May-1994
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                                                                                                                                                                                                                                                                                           39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Torchia, PhD., Timothy E. REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0666P
                                                                                                                                                                                                                                                                                   SOFTWARE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 168 amino acids TYPE: Amino Acid
                                                                                                                                                      CTLLSRTGRA 168
                                                                                                                                                                                     CTLLSRTGRA 130
                                                                                                                                                                                                                      CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV 158
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99.2%;
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Pred. No. 7.9e-72;
0; Mismatches 1;
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                                                                                                            PCT-US91-06950-6
                                                                                                                          RESULT 12
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                         Sequence 6, Application PC/TUS9106950
GENERAL INFORMATION:
APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTRO
                                                                                                                                                                                                                                                                                                                                                           Best Local
Matches 1
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Best Local
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INFORMATION FOR SEQ ID NO:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 31-JAN
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: 3.5 inch, 1.44 Mb |
COMPUTER: LBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: 650/225-8674
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ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER:
FILING DATE: 1991
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CORRESPONDENCE ADDRESS
                 NUMBER OF SEQUENCES:
                                                                                                                                                                         159
                                                                                                                                                                                          121 CTLLSRTGRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Torchia, PhD., Timothy E REGISTRATION NUMBER: 36,700 REFERENCE/DOCKET NUMBER: P0666
                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                       61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/0 FILING DATE: 12-Sep-1997
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                                                                                                                                                                         CTLLSRTGRA
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                             NOVEL NEUROTROPHIC FACTOR
                                                                                                                                                                                                                                                                                                                                                                          98.7%;
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STREET: 460 Point San Bruno Blvd CITY: South San Francisco

California

USA

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US-08-451-947-2
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Best Local Similarity 99.7
Matches 129; Conservative
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TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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APPLICATION NUMBER: 07/51
ATTORNEY/AGENT INFORMATION:
NAME: Hensley, Max D.
REGISTRATION NUMBER: 27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
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LENGTH: 168 amino acids
TYPE: AMINO ACID
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                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
                                                                                                                                                                                                   TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                                                                                  APPLICANT: GENENTECH, APPLICANT: ROSENTHAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                           121 CTLLSRTGRA 130
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                                                                                                                                                STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         39 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 98
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               COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech)
JRRENT APPLICATION DATA:
                                                                                                                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GVSETAPASRRGELAVCDAVSGWYTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
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US/08/451,947
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Best Local Similarity 99.2
Matches 129; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TORCHIA, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/255-8674
TELEFAX: 415/952-9881
FILING DATA:
CLASSIFICATION: 514
CRASSIFICATION DATA:
PRIOR APPLICATION NUMBER: 08/240
APPLICATION NUMBER: 10-May-1994
                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
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APPLICATION NUMBER: 08/0:
FILING DATE: 22-MAR-1993
                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE: 19-Apr-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 210 amino acids
TYPE: amino acid
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CLASSIFICATION:
                                                                                                                   MEDIUM TYPE: 3.5 inch, 1.44 mb floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
                                                                                                                                                                                               COUNTRY:
ZIP: 9408
                                                                                                                                                                                                                                            ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
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99.2%;
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                         08/240387
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Pred. No. 1e-71;
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Gaps

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/64 FILING DATE: 31-JAN-1991

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US-08-928-694-2
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 210 amino acids
TYPE: Amino Acid
TOPOICY: 1 tops:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 129; Conserv
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APPLICANT: ROSENT
                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4:
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
                                                                                                                                       APPLICATION NUMBER: US/08/928,694
FILING DATE: 12-Sep-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/451947
FILING DATE: 26-MAY-1995
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                                                                                                                                                                                                                                                      SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
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PRIOR APPLICATION NUMBER: 07/587707
                 PRIOR APPLICATION DATA:
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201 CTLLSRTGRA 210
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REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0666P1C2
                                APPLICATION NUMBER: 08/030013 FILING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 1 DNA Way
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
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                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                        94080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROSENTHAL, ARNON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                 inch, 1.44 Mb floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98.7%;
                                                                                                        08/426419
07/648482
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Pred. No. 1e-71;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
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Search completed: December 2, 2002, 15:09:45 Job time: 9.99179 secs
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                                                                                                                                                                                                                                                                                                                         Query Match
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                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 210 amino acids
TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 07/587707
FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TOrchia, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0666P2C1D2C1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                    121 CTLLSRTGRA 130
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201 CTLLSRTGRA 210
                                                                                                                                            141 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV 200
                                                                                                                                                              61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                  81 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                   1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                      Local Similarity 99.7
es 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                             Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      650/225-8674
                                                                                                                                                                                                                                                                                                     98.78;
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                                                                                                                                                                                                                                                                                                     Score 689; DB 3;
Pred. No. le-71;
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Search completed: December Job time: 4.5721 secs
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Best Local Similarity 98.5
Matches 128; Conservative
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Patent No. US20020045576Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/426419
EILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648482
FILING DATE: 31-JAN
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587707
PRIOR APPLICATION NUMBER: 07/587707
                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: (
SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
NAME: TOICHIA, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666P2C1D3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/25-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech
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APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
                                                                          121 CTLLSRTGRA 130
                                                                                                 121 CTLLSRTGRA 130
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FILING DATE:
CLASSIFICATION: 514
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STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
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                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                  97.9%; Score 683; DB 8; Length 130; 98.5%; Pred. No. 2.3e-60; tive 0; Mismatches 2; Indels
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US-08-450-842-20
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 08/426
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030
FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648
FILING DATE: 31-OAN
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                           121
 121
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121 CTLLSRTGRA 130
                                                                                                                                                                                                                                                                   LENGTH:
TYPE: a
                                                      61 CKADNAEEGGPGAGGGGCRGVDRRYWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV
                                                                                61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                                                                                                                                                                                       NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,7 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                             FILING DATE:
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               CTLLSRTGRA 130
CTLLSRTGRA 130
                                                                                                                                                                             128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20, Application US/08450842
5. US20020045576A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T: 460 Point San Bruno Blvd
South San Francisco
California
                                                                                                                                                                                                                                                                   amino acid
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                                                                                                                                                                                                                                                                                 130 amino acids
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                                                                                                                                                                                      97.98;
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                                                                                                                                                                          Score 683; DB 8;
Pred. No. 2.3e-60;
1; Mismatches 1
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US-08-450-842-23
                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                   Matches 128;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TORCh1a, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666F
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 31-JAN PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648482
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
121
                             121 CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                   LENGTH: 130 amino acids TYPE: amino acid TOPOLOGY: linear
                                                                 61
                                                                                  61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 413/71-7168
TELEX: 910/371-7168
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 460 Point San Bruno
CITY: South San Francisco
                                                                                                                                                   1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/450,842
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                                                                                                                                   1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
                                                                 CKADNATEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV
CTLLSRTGRA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23, Application US/08450842
5. US20020045576A1
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                                                                                                                                                                                                                  97.98;
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                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                            666P2C1D3
                                                                                                                                                                                                 Score 683; DB 8; L
Pred. No. 2.3e-60;
                                                                                                                                                                                                                                Length 130;
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RESULT 15 US-08-450-842-60

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US-08-450-842-64
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                                                               Matches
                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/426419
FILING DATE: 19-APP-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648482
FILING DATE: 31-CAN
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587707
APPLICATION NUMBER: 07/587707
APPLICATION NUMBER: 07/587707
APPLICATION NUMBER: 07/587707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                           TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM: PC DOS/MS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb
                                                                                                                                                                                                                                    REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666D2C1D3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEPAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acid
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                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                               TYPE: am TOPOLOGY:
                                                                                                                                                                                                                                                                                                      NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CKADNAEEGGPGAGGGGCRGVDRHHWVSECKAKQSYVRALTADAQGRVGWRWIRIDTACV 120
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                                                                 128;
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                                                                                                                                             : 130 amino acids
amino acid
GY: linear
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                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                               98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/450,842
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                                                              Score 684; DB 8;
Pred. No. 1.8e-60;
0; Mismatches 2;
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                                                                                               Length 130
                                                                   Indels
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GENERAL INFORMATION:
                                                                                                                  Query Match
Best Local Similarity
Matches 128; Conserv
                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: PC DOS/MS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
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MEDIUM TYPE: 5.25 inch,
COMPUTER: IBM PC compati
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acid
                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
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APPLICATION NUMBER:
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ATTORNEY/AGENT INFORMATION:
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STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 22-MAI
                                                                                                                                                                                                                                                                                                                        NAME: Torchia, Timothy E. REGISTRATION NUMBER: 36,700 REFERENCE/DOCKET NUMBER: 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
APPLICATION NUMBER: FILING DATE: 1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                             TELEFAX:
                                                                         1 GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
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                                                          GVSETAPASRRGELAVCDAVSGWVTDRRTAVDLRGREVEVLGEVPAAGGSPLRQYFFETR
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SYSTEM: PC-DOS/MS-DOS
                                                                                                                      Conservative
                                                                                                                                                                                          linear
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                                                                                                                                  98.0%;
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                                                                                                                    Score 684; DB 8; Pred. No. 1.8e-60; 1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                              666P2C1D3
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                                                                                                                                                 Length 130;
                                                                                                                       Indels
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US-08-450-842-61
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US-08-450-842-61
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                                                                         TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/426.
ETILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030
FILING DATE: 22-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                      APPLICATION NUMBER: 07/648482
FILING DATE: 31-JAN
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/587707
FILING DATE: 1991
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ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                       FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION NUMBER: 07/648482
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NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                        NAME: Torchia, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 661
                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CKADNAEEGGPGAGGGGCRGVDRRHWVSECKAKQSYVRALTAHAQGRVGWRWIRIDTACV 120
                                            LENGTH:
                                                                                                                       TELEPHONE:
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Local Similarity 98.5%;
Les 128; Conservative
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             amino acid
)GY: linear
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                                            130 amino acids
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                                                                                                        415/225-8674
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Pred. No. 1.8e-60;
0; Mismatches 2;
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RESULT 10
US-08-450-842-63
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                                                              US-08-450-842-63
                                                                                                                         REFERENCE/DOCKET NUMBER: 666P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 63:
SEQUENCE CHARACTERISTICS:
Query Match 98.0%;
Best Local Similarity 98.5%;
Matches 128; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 63, Application US/08450842 Patent No. US20020045576A1 GENERAL INFORMATION:
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: (FILING DATE: 31-JAN PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 08/4: FILING DATE: 19-APR-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM: PC-DOS/MS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 07/51
FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 22-MAR-1993 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
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TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
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APPLICANT:
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CLASSIFICATION:
                                                                              TOPOLOGY:
                                                                                                                                                                                                                                            REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
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                                                                                                            LENGTH:
                                                                                                                                                                                                                                                         NAME:
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
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                                                                                               amino acid
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                                                                                                            130 amino acids
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SYSTEM: PC-DOS/MS-DOS
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Score 684; DB 8; ]
Pred. No. 1.8e-60;
0; Mismatches 2;
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Pred. No. 1.8e-60;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Blvd
                             Length 130;
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Best Local Similarity
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TELEF: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-8674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                                          APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648482
FILING DATE: 31-JAN
                                                                                                                                                                                                       APPLICATION NUMBER: 08/4 FILING DATE: 19-APR-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: GENENTECH, APPLICANT: ROSENTHAL,
          FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TOUCHIA, Timothy E
REGISTRATION NUMBER: 36,
REFERENCE/DOCKET NUMBER:
                                                                                                           FILING DATE: 31-JAN PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno
CITY: South San Francisco
                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 514
                                                                           APPLICATION NUMBER: 07/587707 FILING DATE: 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
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98.5%;
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Pred. No. 1.4e-60;
1; Mismatches 1
                 666P2C1D3
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Best Local Similarity 98.5%;
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                                                                                                                                                                                                                                                      CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/426
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030
            INFORMATION FOR
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APPLICANT: ROSENTHAL,
TITLE OF INVENTION: NO
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch,
                                                                                                                     FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 1991
                                                                                                                                                                                                        FILING DATE: 22-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/648482
                                                       TELECOMMUNICATION INFORMATION: 15/225-8674
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                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                NAME: Torchia, Timothy REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
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                                                                                     REGISTRATION NUMBER: 36,700 REFERENCE/DOCKET NUMBER: 66
                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                              TELEX:
                                            TELEFAX:
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N FOR SEQ ID NO:
CHARACTERISTICS
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460 Point San Bruno
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                                                                                                                                                                                                                                                                                                                                                                                                                                            360 Kb floppy disk
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                                                                                          666P2C1D3
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Pred. No. 1.8e-60;
0; Mismatches 2
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 210 amino acids
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ATTORNEY/AGENT INFORMATION:
NAME: TOTCHIA, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 666P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/255-8674
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                     BENERAL INFORMATION:
APPLICATION NUMBER: 08/0: FILING DATE: 22-MAR-1993 PRIOR APPLICATION DATA: APPLICATION NUMBER: 07/6/
                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
                                                               FILING DATE: 19-APR-PRIOR APPLICATION DATA:
                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: 5.25 inch,
                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                APPLICATION NUMBER: 08/426419 FILING DATE: 19-APR-1995
                                                                                                                                 FILING DATE:
CLASSIFICATION:
                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                             COUNTRY:
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US20020045576A1
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amino acid
OGY: linear
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99.2%;
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RESULT 6
US-08-450-842-68
Sequence 68, Application US/08450842
; Patent No. US20020045576A1
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Best Local Similarity
Matches 128; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: GENENTECH,
APPLICANT: ROSENTHAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 130 amino acid
                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/450,8: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                                          APPLICATION NUMBER: FILING DATE: 22-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4:
FILING DATE: 19-APR-1995
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NAME: Torchia, Timothy F
                                                        PRIOR APPLICATION DATA:
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FILING DATE: 1991
TORNEY/AGENT INFORMATION:
                                                                          APPLICATION NUMBER: FILING DATE: 31-JA
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CITY: South San Francisco
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                                   APPLICATION NUMBER:
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Pred. No. 1.4e-60;
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PRIOR FILING DATE: 1998-09-22
NUMBER OF SEQ ID NOS: 41
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 12
LENGTH: 131
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Best Local (
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APPLICANT: Mariusz W. Szkudlinski
APPLICANT: University of Maryland
TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS
FILE REFERENCE: UOFMD.003C1
CURRENT APPLICATION NUMBER: US/09/813,398
CURRENT FILING DATE: 2001-03-20
PRIOR APPLICATION NUMBER: PCT/US99/05908
PRIOR FILING DATE: 1999-03-19
                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: GENENTECH, INC.
APPLICANT: ROSENTHAL, ARNON
TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR
NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
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CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 168 amino acids
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Best Local Similarity 99.7
Matches 129; Conservative
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FILING DATE: 1991
ATTORNEY/AGENT INFORMATION:
NAME: TOTCHIA, Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: 6666
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TELEPHONE: 415/225-8674
TELEFAX: 415/952-9881
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PRIOR APPLICATION NUMBER: 07/648482
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MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: NOVEL NEUROTROPHIC FACTOR NUMBER OF SEQUENCES: 100
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
APPLICATION NUMBER: 08/426419
FILING DATE: 19-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/030013
FILING DATE: 22-MAR-1993
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                                                                                       PRIOR APPLICATION DATA:
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                                                                                                                          APPLICATION NUMBER: FILING DATE:
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                                                                                                        CLASSIFICATION: 514
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Pred. No. 7.6e-61;
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      length: 0
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Match
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Copyright (c) 1993 - 2002 Compus
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US-09-813-398-12

US-08-450-842-6

US-08-450-842-62

US-08-450-842-63

US-08-450-842-59

US-08-450-842-59

US-08-450-842-61

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JWYTDRRTAVDLRGREVEVLGEVPAJ 	8; Score 698; DB 12; 8; Pred. No. 7.7e-62; 0; Mismatches 0;	072681  SH. FION OF NGF 15/10/072,681 2030838 3047855 4970865 4970865 4075,503 363573 363573 363573 363573 363573	ALIGNMENTS	US-08-450-842-73 US-08-450-842-17 US-08-450-842-18 US-08-450-842-19 US-08-450-842-11 US-08-450-842-13 US-08-450-842-13 US-08-450-842-15 US-08-450-842-15 US-08-450-842-53 US-08-450-842-53 US-08-450-842-53 US-08-450-842-59
PAAGGSPLRQYFFETR	Length 130; Indels 0; Ga			Sequence 73 Sequence 17 Sequence 17 Sequence 18 Sequence 19 Sequence 21 Sequence 11 Sequence 11 Sequence 15 Sequence 16 Sequence 16 Sequence 50 Sequence 57
60 60 120	ps			Appl Appl Appl Appl Appl Appl Appl Appl